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# COOKING IN THE VOCATIONAL SCHOOL

## AS TRAINING FOR HOME MAKING

BY

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# PREFACE.

This bulletin deals with the teaching of cooking for home-making purposes in the day and evening classes of the vocational school. Throughout the bulletin "vocational school" will be used as a term which includes both industrial schools and household-arts schools.

Vocational schools include all agricultural, industrial, commercial, and household-arts schools the controlling purpose of which is to fit for useful occupations, and which deal with pupils above 14 years of age and below college grade.[1]

This discussion recognizes that vocational schools for girls are of two types:

(1) The industrial school, designed to meet the needs of the manual wageworker in the trades and industries and in the household.

(2) The household arts school, which fits for nonwage-earning occupations connected with the household.

In certain communities there are found schools attempting to give both kinds of instruction under one roof and within one organization. In such case, for the purpose of this discussion, each of these groups will be regarded as a "unit school"—one an industrial school, the other a school of household arts.

While the industrial school is mainly concerned with training girls to become wage earners in industry, it also gives its pupils more or less instruction in cooking for home making. In the school of household arts, cooking is a most important factor in the training for home making. The instruction given these two groups differs not so much in method or content as in the amount of time devoted to the subject.

It is the purpose of this bulletin to discuss the conditions which underlie the necessity for instruction in cooking, to define the aim of such instruction, and to offer suggestions that may be of service toward the final solution of the problem. At the same time it is recognized that the final solution will probably go far beyond any plans suggested in these pages. Section VI (p. 26) is intended to be of direct assistance to vocational schools contemplating instruction in cooking; it gives plans and estimates which have been employed for construction, together with a detailed list of equipment and utensils.

This paper is not concerned with the training of professional cooks, nor with training for the wholesale production of food as required in restaurants and bakeries. While this is a legitimate purpose of trade instruction in cooking, as yet there has been little or no demand upon the vocational school by workers wishing skill of this kind.

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[1] A tentative statement of principles and policies issued by the National Society for the Promotion of Industrial Education, February, 1913.

This discussion has nothing to do with the teaching of cooking in the prevocational or the continuation school, nor is it concerned with such instruction in the grades or in the high school, except as the method used in these schools is carried over into the vocational school and there used as one method of training girls and women for home making. Excellent work has been done in these schools by the methods commonly employed, and it is not the intention of this paper to enter this field either for the purpose of criticism or suggestion.

For assistance in collecting material for this publication acknowledgment is gratefully due to the following: Miss Laura Parker, head of the cooking department, Boardman Apprentice Shops, New Haven, Conn.; Miss Mary H. Brown, principal of Girls' Trade School, Somerville, Mass.; Mrs. Eva White, State agent for Girls' Industrial Schools, Massachusetts Board of Education; and Mr. D. E. Clark, John E. Bassett Co., New Haven, Conn.

# COOKING IN THE VOCATIONAL SCHOOL.

## I. HOME MAKING AS A VOCATION FOR GIRLS.

The education of the girl who comes to the vocational school is a double problem. It must include training in two distinct vocations, neither of which can be considered sufficiently permanent to justify neglect of the other. The training in either one of these vocations, moreover, is not adequate preparation for efficiency in the other.

As compared with the boy, the future of the girl admits of a variety of adjustments:

(1) She may, like the boy, go into the industry to remain as long as she is physically able.

(2) She may, and most often does, go into industry for a short period, variously estimated at from three to seven years, and then permanently become a home maker.

(3) Having left the industry for her own home, circumstances may compel her to return to wage earning.

(4) She may be under the necessity of serving in a double capacity, being compelled to support the home which she manages.

Every evidence goes to show that, while the girl may enter the trade, she is, in the majority of cases, at one time or another a home maker. In confirmation of this is her personal, if unconfessed, point of view that wage earning for her is but a temporary affair, which she will leave for a permanent position in her own home. If this home is to be a going concern, the woman who manages it must be trained for her work as thoroughly as the man who supports it.

### HOME MAKING A UNIVERSAL TRADE.

In the number of persons employed it outranks all other trades in the country. The Government census, however, fails to recognize the housekeeper as having a trade, because under normal conditions she receives no wage. According to the last census returns there are in the United States about 31 millions of women over 10 years of age. Of these 31 millions 1½ millions are working in shops and factories and 5½ millions are employed in domestic service. Of the remaining 24 millions no accounting is given, since the majority of these women are engaged in home making.

Many people believe that these figures are exaggerated and that no count has been made of the woman who goes back into the industry or of the home maker who is also a wage earner. Even if this be so, these figures conclusively show that after all possible allowances have been made the total number of women engaged in wage-earning trades is small as compared with those actively engaged in home making. The demand for skilled workers in some of these trades is limited to the cities, and training for any of them is advisable only where the industry is so well developed as to insure a steady demand for labor. On the other hand, home making is a trade for every woman and the demand is universal.

## THE STANDARD OF COMFORT IN THE HOME.

Another phase of the economic aspect of this problem of training the girl is the standard of comfort in the home as a factor in the efficiency of the worker. Some manufacturers, especially those employing unskilled or semiskilled labor, are finding that improvement in the quality of the service which they require must come, in part at least, through improvement in home conditions which make for the health and comfort of the employee. The standard of comfort, as determining the efficiency of the worker, depends largely on the proper selection and preparation of food. To improper rather than insufficient food is directly traceable many cases of undernourishment, with resulting sickness, loss of vitality, and consequent loss to the industry and to the worker.

In the average working-class family adequate returns are seldom received from the money invested in food. This is due to several distinct causes:

(1) Buying of foodstuffs which, through dirt, decay, or adulteration, are unfit for use.

(2) Use of food which alone or in improper combination does not supply nourishment.

(3) Ignorant or careless cooking, where digestibility, attractiveness, and food value are lessened.

(4) Careless and hurried serving, which makes no appeal to the appetite.

Another evidence of the necessity for a better standard of living in the home is the tendency in many industries, as shown by legislation and the activities of various social organizations, to demand for entrance to the industry certain health requirements. Manufacturers themselves are beginning to see the wisdom of this, and in some industries are demanding a health standard for continuance in employment.

### WHY THE VOCATIONAL SCHOOL MUST TEACH COOKING.

The demands on the housekeeper are changing in their nature and are becoming more complex. She is less concerned than formerly with the production of raw material, for her work is becoming that of an assembler rather than of an elementary producer. Her position is best illustrated by the familiar story of the promised dinner which was to take a thousand men to prepare, and which proved to be the usual family meal—the work of the thousand men passing through the housekeeper's hands for final preparation. She stands between the manufacturer and the ultimate consumer. Sugar, flour, spice, and butter come to her ready for their final use; she is not responsible for production, but for selection from the varieties offered. To meet these demands requires training which shall develop not only skill, but judgment and discrimination.

Not only have the demands on the housekeeper become more complex, but at the same time the situation in the home itself has so changed that it is no longer fitted to train the girl to meet the new demands which will be made upon her. As the day has passed when a boy is successfully apprenticed to a trade, so a girl is no longer apprenticed to her mother. The passing of this home "apprenticeship" probably accounts in part for the great number of girls who have no knowledge of the simplest domestic work.

The fact that the girl goes into industry much more than formerly lessens the opportunity for home instruction. Where her wage is an important item in the family support, she often leaves school as soon as the law permits. There is also an increasing number of girls who work from choice in order to be free from home restraint and to obtain the semi-independence which even a small wage gives them.

There is a relaxing of home control in America, resulting in the girl participating less and less in the activities of the home. She is going outside not only for employment but also for amusement. This makes her interest in home conditions and her understanding of them proportionately less.

There is also an increase in a certain type of home, especially in large cities, in which there is no home life; in which all the women of the household work in industries where the hours are so long and demands on the strength so great that there is little time or inclination for the care of the home. Women of such households seldom know how to do women's work by efficient and labor-saving methods. Many of these women are of foreign birth or parentage. In their migration they have cast aside the standards under which they were bred or else have found these standards wholly unsuited to their new living conditions. They are further hampered by their ignorance of the language and of American foods and markets. They are victims of overcrowded housing conditions, which give neither the space nor the privacy necessary to well-ordered family life.

## DIFFICULTIES OF TEACHING GIRLS COOKING FOR HOME MAKING.

In teaching cooking in the vocational school certain special difficulties are met at the outset. One of these is the lack of interest on the part of most girls. The trade school is dealing with girls from 14 to 18 at a period when their interest in home making is slight. At this age many girls are chiefly interested in dress and a good time, while many others have vague dreams of a future that has little to do with home making. Few girls are seriously interested in home making until later.

Lack of interest on the part of the girl is frequently accompanied by a lack of interest on the part of the mother, and consequent failure to encourage training, which seems to imply that the mother can not or does not give efficient instruction in her own trade. If the girl cherishes a vague hope that her own home making may be accomplished without physical effort on her part, she often has the unacknowledged support of her mother in looking forward to a marriage which will "better her condition."

Benefit from instruction in housekeeping is to the girl a deferred value and to her mind a doubtful one. In learning a trade, such as millinery or dressmaking, the economic pressure of needing money and of wanting the things which money can buy, together with a by-product of skill which she can turn to her own personal use and adornment, stimulates her trade interest. In the case of cooking she has no such interest to assist the learning process.

Lack of trade organization and of trade spirit make any kind of trade instruction difficult. Very little of woman's work has been standardized, and conditions in the home industries are especially chaotic. Factory legislation and the "eight-hour" law are needed in many kitchens. There is little system or organization in carrying on the work, and results, as in cooking, are often characterized as good or bad "luck." Housekeeping lacks the spirit and inspiration which come from teamwork. The woman who has been in industry misses the companionship to which she has been accustomed. She also finds herself without a tangible incentive to speed and quality of work.

Again, the ability to cook is something with which every girl is by tradition endowed. Theoretically she acquires this ability either by inheritance or instinct. No number of poor cooks seems to offset the belief that skill in this trade will always come at the call of necessity.

In addition to the difficulties already mentioned there exists a well-defined prejudice against "school-taught home making." This is in part due to the same ignorance which once looked with suspicion upon the "book farmer," but it is also due to the failure of instruction in home making to tie up with home conditions and to produce proofs of efficiency.

### TENDENCIES MAKING FOR INCREASED EFFICIENCY IN HOME MAKING.

On the other hand, a number of new factors that have a direct bearing on instruction in cooking are already bringing about a change in attitude and a new understanding of the problem:

(1) The recognition of home making as a trade, which may be raised to the dignity of a profession, and therefore requiring adequate "trade" training.

(2) State reimbursement for courses which can give proof of increasing woman's efficiency in the home; the success of such courses tends to place this work in the same class as other State-subsidized trade instruction.

(3) The organization of cooking classes in vocational schools, where these classes are put on the same basis as other departments which must maintain trade standards of efficiency and whose product may be marketable.

(4) The increase in the cost of living, which is convincing many housekeepers that they must have a more expert knowledge of the materials with which they deal.

(5) The growing difficulty of obtaining paid service is also making domestic skill more necessary to the housekeeper for the maintenance of the home.

## II. REGULAR SCHOOL METHODS AND "TRADE" TRAINING IN COOKING.

When the vocational school offers instruction in any subject that has been taught in the regular schools, it is not only under the necessity of providing instruction that shall be efficient, but often it must also show why this instruction can not be given by the methods already familiar and accepted.

As an aid to an understanding of the question, two kinds of instruction must be recognized and the difference between them clearly understood:

(1) Instruction whose aim is to develop appreciation.

(2) Instruction whose aim is "trade" training.

Instruction whose aim is appreciation is given as part of a general education and not primarily to develop productive capacity. In cooking such instruction is based on the theory that the desired knowledge can be best given by teaching underlying principles through a study of typical processes and materials. This training is commonly given on the basis of laboratory exercises, which are essentially imitative and illustrative; it does not employ the methods or assume the "shop" conditions of commercial practice. The members of the group to be served are selected by the ability to meet certain educational requirements—namely, to pass the entrance requirements of their grade or class.

The aim of "trade" training in cooking is to teach the subject in such a way as to give actual ability to do this work under home conditions in what might be called a professional manner; to give manipulative skill and knowledge of materials and processes as they have to do with the making of a "commercial" product. This training should be given under the conditions of the domestic industries and by such methods as shall fit the pupil for the demands that will be made upon her by actual household work. The group to be served should be composed of those who desire this kind of instruction and are able to meet the trade-school requirements as to age and elementary schooling.

When the vocational school is confronted with the problem of instruction in cooking, it is natural that it should turn to methods that are already established and familiar. For this reason it seems necessary at this point to go into the detail of the instruction, as to its fitness for vocational purposes. The following discussion, therefore, is in no sense an attack upon cooking as taught in the public schools, but merely a development of the special purpose of this paper as outlined in the preface.[1]

The accepted method of teaching cooking in the regular day school has usually been either by the "group method," where several pupils unite in the preparation of one dish, or by the "individual receipt," where each pupil has the complete experience, but in such small quantities as to destroy its value for practical purposes. In one the girl's experience is fractional, with no direct responsibility for results, while the other is a demonstration method adapted to laboratory conditions, but with little or no domestic value or vocational content. These methods owe their existence partly to the fact that under the given conditions disposal of the product is not a serious problem nor the expense of maintenance prohibitive.

The common method makes the unit of instruction soup, muffins, or salad, and very seldom reaches the normal consideration of the meal as a whole. In the same way the individual responsibility for napkins, silver, and dishes is given the girl, instead of the unit of the well-set table. This kind of specialization carried far enough might be applicable to a trade which had reached the specialized stage of factory development, but it is not applicable to a trade that is still carried on in the home.

Under favorable conditions a grade pupil devotes to cooking 2 hours a week, or a total of 80 hours a year. With this limited time it is necessary to confine instruction to representative processes, and only those processes that can be carried out in the lesson period. This time allotment may be sufficient for the subject when taught from the standpoint of appreciation; and for a study which is only one of five or six in a general education it is all that can reasonably be expected within the time limits of a school course. When cooking is to be practical training, however, the time must approximate that which the woman will spend in this work in her own home. It must be sufficient to give professional skill and a comprehensive knowledge of materials and processes.

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[1] P. 5.

Inefficiency of the work, whether due to improper equipment, incorrect methods or poorly qualified teachers, is usually attributed to the size of the class. This is a legitimate excuse, since these classes usually number from 25 to 30 pupils. This prohibits either individual or group instruction and necessitates mechanical methods of handling the classes—the pupils file into the classroom, each girl going to an assigned place and doing designated work according to a routine in which she is more or less drilled. A certain "action under direction" is made to take the place of individual initiative and responsibility. A girl can not be allowed to learn from her own experience if this will involve 25 others in the same mistake.

"Trade" classes should not be so large as to preclude individual instruction or to compel a girl to work under artificial conditions. A housekeeper handles her work in a certain routine, but it is an elastic routine imposed by the conditions of the job.

Among the teaching force in the regular schools may be found many women whose training is entirely academic and whose only contact with their subject is from a teaching standpoint. Their preparation for the work consists mainly of training received in domestic-science classes of schools and colleges.

When this work is approached from the "trade" rather than the cultural side, the necessity of "trade" experience for the instructor is obvious. She must be familiar with the conditions for which she is training the pupil and must possess the expert knowledge and skill that come only from actual experience.

The method of furnishing supplies is another instance of where the attempt to run this work on accepted school lines is detrimental to its efficiency as trade training. In the regular school system all supplies must usually be estimated, standardized, and requisitioned weeks in advance. This makes it necessary for the work to follow a fixed schedule, and no attempt can be made to serve a need calling for a variation in supplies. For example, the presence of a number of Jewish pupils might make it desirable to teach Kosher cooking, which could not be done with standard supplies. Again, it is impossible to take advantage of unusual circumstances, such as the unexpected cheapness of certain fruit for canning and preserving, or the demand for "hot-weather dishes," caused by an unlooked-for rise in temperature. This method of furnishing supplies will not admit of buying advantageously for the varying demands of a commercial market. What is more important, under these conditions pupils can do none of the actual buying; they can have no direct contact with market conditions and no responsibility as to quantity and quality purchased. Furthermore, trade training can not be given with the extremely limited amount of material usually furnished for grade work. If individual work is to be done with these amounts, it is necessary to cook in extremely small quantities and sometimes to divide the preparation of even these limited portions between two pupils. These portions are too small for profitable experience. As an alternative to this the class is sometimes divided into workers and observers. Comment on this situation is unnecessary.

The most common method of providing for cooking in the regular school is by what is called the "individual equipment." The "horseshoe," hollow square, and detached tables are all familiar arrangements of this method, where each pupil has her own table space, with closet and drawer room for her individual utensils. These utensils are usually of a size especially adapted to the preparation of small quantities. Larger utensils are provided for use among several pupils, and there is more or less general equipment for class use. For baking, a gas or coal range sometimes supplements the individual gas burners. The result is an arrangement more like a school laboratory than a home kitchen. Such an equipment is adapted to conventional teaching conditions rather than to working conditions in the home, and can not possibly suffice for teaching cooking in the vocational school.

## THE TEACHER.

The difference in the aim and purpose of these two kinds of training demands a different type of teacher. As has been previously stated, neither the training nor the experience of the usual teacher of domestic science has been such as to fit her for "trade" teaching. The teacher of cooking for home-making purposes in the vocational school should have for entrance into the work the following qualifications:

(1) *Trade qualifications.*—Experience in home making, such as could be obtained from actual housekeeping. Commercial experience in the preparation or marketing of food, such as would be obtained in a food salesroom, tea, or lunch room.

(2) *Technical qualifications,* such as knowledge of food composition and values, food manufacture and adulteration, chemistry of foods, physiology of digestion, etc., equivalent to that given in the usual normal course in domestic science.

(3) *Academic qualifications.*—Graduation from high school or its equivalent.

(4) *Teaching qualifications.*—Knowledge of aim, organization, methods, and problems of the vocational school and ability to teach the subject so as to meet its requirements. This training is not at present commonly given in normal-school courses.

(5) *Personal qualifications.*—The usual requirements of neatness and of attractive personality, liking for young people, and enthusiasm for the subject.

At present few schools are giving adequate preparation for all these requirements, and it is doubtful if certain qualifications can ever be obtained in the school alone. For some time, at least, the vocational school will be under the necessity of giving supplementary training to teachers after they have been admitted to service. Technical knowledge can already be had in schools better fitted for this purpose than the vocational school. The "trade" experience for the most part must be obtained in the "industry," and should be a prerequisite for service. Some provision must be made within the vocational school itself for further training in teaching after the teacher has entered the service and for contact with the home conditions of the pupil.

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## III. MARKETS FOR THE PRODUCT.

The product of the home kitchen is not commonly sold, but it must always be "marketable" in the sense that it must meet the demand of the consumer, both as to quality and cost. This demand is not standard, but varies according to the requirements and circumstances of individual homes.

The girl must have the knowledge and skill which come from the actual handling of material. If she can be put up against the necessity of making her product meet the test of a commercial market, she becomes at once responsible for quality, cost, and promptness of delivery. This market will also make it possible to give her experience in handling food in the variety and quantity required in the average home. The element of reality, moreover, will stimulate the interest of the pupil and give point to the teaching; for under these conditions the instruction, as well as the product, must meet the commercial test of efficiency.

The market selected has much to do with the success or failure of the instruction. The attempt to supply markets which do not give proper training is a common cause of inefficiency. This may be because the kind of food demanded is not that which is needed by housekeepers. For instance, ability to make the small decorated cakes which find such a ready sale in tea shops might be an interesting accomplishment for a housewife, but great skill in this is hardly essential to the preparation of family meals. It may also be found that supplying the market selected involves too much repetition and does not give the necessary variety. For example, a school lunchroom has a constant demand for sandwiches and cocoa, which are not important articles of home consumption. Again, a market may be too limited to give pupils proper working habits—the housewife works under a certain pressure which demands speed and a division of attention. Too small an output will not make a sufficient demand on the pupil.

There are in every case difficulties to be met when the vocational school attempts to deliver a commercial product. These are more or less peculiar to the local situation and the individual school. In addition to these, the cooking department has handicaps of its own which are peculiar to the "trade."

(1) In case of error or failure the chance of recovery is small. A misplaced ingredient can not be removed, and it is impossible to take apart the product for another trial.

(2) Strict time conditions govern certain markets; products for these markets must be ready at a stated time with little if any leeway.

(3) All the products are of a perishable nature.

(4) In certain articles every minute between production and consumption lessens marketability.

(5) In almost no other market is the individual peculiarity of the customer such a controlling factor.

Which method of marketing the product is best adapted to the individual school can only be decided after a careful study of local conditions and consideration of such points as the following:

(1) Will the product required be such that from its preparation the pupils can get the kind and variety of training needed?

(2) Will the amount of product required be in proportion to the number and ability of the pupils?

(3) Will the time of delivery be such that the school schedule can be adjusted to meet it?

(4) Will the undertaking be a successful commercial transaction and escape charity, graft, and bankruptcy?

### THE SCHOOL LUNCH AS A MARKET.

One of the most common markets is the school lunch. This is usually a proposition to serve moderate-priced food at, or near, cost. Aside from all question of its desirability as a market, one point to be considered is that it puts hot and nourishing food within reach of the pupils at a price which they can afford to pay.

As a market for a commercial product it has certain disadvantages. There is present the usual danger of exploiting the pupil, because the absolute necessity of having the product in condition to serve at a fixed time may too easily outweigh all other considerations. To supply food in such quantities as a lunchroom demands will give excellent training in "wholesale cooking," but it requires careful handling to meet this demand and still keep the family meal as the basis of instruction. Again there is the daily demand for certain staples that are not of much importance to the housekeeper. To these three objections may be added a fourth—unless some special arrangements can be made, the school lunch as a market offers no opportunity for teaching table setting or service.

In spite of these difficulties, however, the school lunch can be made a desirable method of disposing of the product if the food and not the girl is adjusted to the market. The first consideration must be that the pupils who prepare the lunch are given the kind and variety of cooking needed in a home. They must not be held to the drudgery necessary to the preparation of food in large quantities. The ability to make 16 loaves of cake at once is of little value to the ordinary housekeeper. When this quantity is needed, 8 girls can be given this rule to double, or 16 girls can each make one loaf. Thirty pounds of fowl can be divided among several classes, every girl having the responsibility of dressing and cooking a chicken. The final destination of ham, corn beef, and fowl may be a sandwich by way of the meat copper, but out of this meat the pupils have had working experience with home quantities.

Distribution of work can be made after consulting the record of each class, so that every girl has a variety of experience, and only repetition will be necessary to gain skill and confidence. Heavy work that has to be repeated every day, such as slicing bread, making cocoa, and washing dishes, can be done by hired help and figured as part of the cost of the lunch to be covered by the selling price.

This plan has proved feasible in that it has given pupils cooking experience in quantity and kind that would have been impossible without a market for the product. It has furnished a market which is more entirely within the control of the school than any other that has been tried. This control of the market is an important factor, moreover, for it lessens the likelihood of exploiting the girl for the sake of a commercial product. It also increases the possibilities of shaping the demand to fit the product of which disposal must be made.[1]

## TEA ROOM, FOOD SALESROOM, CATERING AS A MARKET.

Another commercial market for the product of the cooking classes may be secured by opening a public lunch or tea room. When pupils are being trained for commercial cooking, this affords a better opportunity for business experience than does the school lunch; but for the pupil who wishes cooking only as a part of her training in home making the lunch room and the tea room are open to certain objections. One of these objections is the amount of work involved that is without direct bearing on home making. Another is that when catering to the public the pressure of producing both quantity and quality is such that all considerations of training are frequently sacrificed to the commercial product.

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[1] This plan is in successful operation in the Newton Technical High School, Newton, Mass., the New Bedford Industrial School, New Bedford, Mass., and the Boardman Apprentice Shops, New Haven, Conn., and other places.

There are, however, distinct advantages in this method of disposal. The general trade has more money to spend than the pupil who patronizes the school lunch. This trade buys a meal rather than a supplement to food brought from home. The demand for substantial dishes is greater, with not so much call for sandwiches and desserts. This makes it possible to keep a better balance in the cooking, and to give the pupils more variety in meat, fish, soup, and vegetables—especially vegetables, for which there is a comparatively small sale in the school lunch room. There is an opportunity for table setting and service which is lacking where the trade consists of 3 and 5 cent orders served in large numbers.

When the school is not favorably located to secure the kind of trade desired, it will be necessary to rent space in the business section of the city, often at a distance from the school, in order to carry on this business. A departure of this kind introduces additional problems into the school management.

(1) Can the school handle sufficient trade to meet the rent and other expenses incidental to an undertaking of this kind?

(2) Can a sufficient number of teachers be had to care for a "scattered school?"

(3) Have any of the school faculty sufficient business ability to manage the proposed undertaking?

(4) How can work which is drudgery and not a legitimate part of the pupil's training be handled?

(5) What arrangements can be made for the time schedule, and, if necessary, how will transportation of the pupils between the school and the lunch room be provided?

(6) Service at the lunch room will call for long hours. What assignments can be made in justice to the pupils?

(7) Shall all pupils put in some time at the lunch room daily, or shall the work be done by pupils serving longer hours and a week at a time?

(8) Will it be possible to make a financial success of a lunch which is only open for business when the school is in session, or will it be necessary to make some arrangement for its operation on Saturdays and during vacation?

(9) If so, how can it be done?

In a general discussion of this kind no attempt can be made to answer these questions. They are offered to further emphasize what has already been stated—that no decision should be made as to method of marketing the product until after a careful consideration of the local situation. The final decision in every case must be made on the basis of the conditions governing the individual school.

Another method of disposal which is often advocated is cooking for the food salesroom. The experience to be had from this market is limited, since it involves the repeated preparation of a few articles of food. The demand is chiefly for bread, cake, and pies.

Among the patrons of a food salesroom it is often possible to work up a trade in the jellies, pickles, and preserves which it is desirable that the pupils be taught to make. These articles form a product which it is not always easy to market at a profit in the school lunch. This is, however, a minor consideration. If the school produces a standard article put up in attractive shape, there is usually no difficulty in disposing of all that can be made through a local grocer.

When the school has under its control facilities for serving a number of people, and when these are in an accessible location, there will be numerous opportunities for catering for school organizations and local gatherings. This gives the pupils an opportunity to prepare food different from that which constitutes the bulk of their experience. It brings them in touch with the social life of the community and gives them excellent discipline in teamwork.

## IV. PART-TIME CLASSES FOR HOUSEKEEPERS.

The teaching of cooking in the vocational school is not only the problem of training the 14 to 16 year old girl; it is also the problem of teaching the adult housekeeper. In every community there are women engaged in home making who have found that in certain ways they are not equal to the task they have undertaken. Their inefficiency is due to a lack of specific knowledge or skill. In the case of cooking, it may be that a housekeeper has found that there are certain things which her family want that she can not make well, such as bread, pie, or jelly; or perhaps she is not able to feed the family satisfactorily with the money at her disposal. Just as economic necessity brings the wage earner to the trade school to increase her earning capacity, so economic necessity may also bring the housekeeper to the school to direct her spending capacity.

Besides the young housekeeper who may find herself unable to meet the demands of her particular domestic situation, there is also the more mature housekeeper, whom the vocational school can serve. She, too, may not be able to meet certain demands of her household, or it may be that she needs help in adapting herself to changing conditions. Increase in the cost of the food material which she has been accustomed to handle has put it out of her reach. For instance, she can no longer afford to buy the only cuts of meat which she knows how to cook; or she hears of new methods and labor-saving devices of which she is ignorant, such as casseroles and the fireless cooker.

Both cases concern women who have had experience in the work for which they need instruction and are able to define their needs. A "general course in cooking," which may be adapted to the ignorance of the beginner, takes no account of the skill and knowledge these mature workers have gained by actual experience, and may waste their time on work in which they are already proficient. The general course also assumes that these women all have the same need of instruction, while actually there are only small groups with a common need. Housekeepers of the kind described are ready to give their time and attend classes in cooking, if they have any assurance of learning the particular thing or things they wish to know. To secure the attendance of a housekeeper of this type, the vocational school must organize its work in a large variety of short units to meet her needs, arrange the sessions of the classes to meet her convenience, secure a teacher in whom she will have confidence, and then bring these classes to the attention of the woman who is very much confined within her own home. The short-unit course is the kind of instruction needed for this work. Such a list of unit courses for housekeepers as will be found on page 23 is only suggestive; these may be repeated, duplicated, and extended according to the demands of the individual situation.

Attendance can be secured for both day and evening classes in cooking. The housekeeper differs from the wage earner in that to a certain extent she controls her own time; her work can be adjusted to admit of more or less absence. This makes afternoon classes for the housekeeper not only possible, but in many cases most desirable. In some instances she finds it more convenient to attend evening classes. This is especially true of the housekeeper who is also a wage earner.

A successful teacher of these classes must have a personality which inspires respect and confidence in these women; she must be a person to whom they will go individually for advice. There is not as great a necessity here for commercial experience as for a wide domestic experience in all kinds of home cooking. For certain special work, such as Italian or Kosher cooking, a teacher may be needed who knows the language or is of the same nationality as her pupils.

Bringing these classes to the attention of the women who will be benefitted by them is a question of judicious advertising. Posters are of little value for this purpose, as they do not go into the home. The newspaper will reach a certain type of pupil, but in other homes it is never read by the women of the family. One of the most effective methods is the circular or circular letter sent through the mail. Mailing lists can be made up from the membership rolls of organizations patronized by the women the school wishes to enroll. Many labor unions have declared themselves in favor of home-making instruction for women, and in some instances have shown interest in placing this information in the hands of wives and daughters of their members. These circulars must be a very clear and simple statement of facts. At the risk of repetition, they should answer all possible questions in regard to the classes. The circulars below have been used for this purpose and are inserted to show what information it has been found necessary to give.

### COOKING AND SEWING CLASSES FOR WOMEN OF ............

#### (A) At the Girls' Department of the Trade School.

| | |
|---|---|
| When: | If there is sufficient demand, it is planned to open these classes January 5. |
| Where: | At the Girls' Department of the Trade School, 79 Broadway. |
| For whom: | These classes are opened to any woman or girl over 16 years old who lives in the city of ............ |
| Cost: | These classes are free. |
| Session: | Each class meets once a week from 3 until 5 o'clock. The number of lessons is given after each subject. |
| Product: | For the dressmaking classes you bring your own material and have what you make. The school furnishes the material for the cooking classes, but you can have what you make by paying what it costs. The classes in expert cleaning and fine laundry work will give you a chance to cleanse your own clothes. |
| Teachers: | These classes will all be under the charge of women who are experts in the work they teach. |
| Registration: | To register, fill out the attached blank and mail to the Trade School, 79 Broadway. Additional blanks may be obtained at this office. A woman may register for any one of these courses or for more than one if she wishes. Admission to all these classes is limited to 15 to 20 pupils; the preference will be given to those who register first; so *Register at once.* You will be notified by mail if your application can be accepted and the date on which the first meeting of the class will be held. No class will be opened unless there are at least 15 applications for instruction in that subject. |

#### COOKING FOR HOUSEKEEPERS.

| | Lessons. | | Lessons. |
|---|---|---|---|
| 1. Yeast bread, biscuits, and rolls.. | 6 | 6. Breakfasts...................... | 5 |
| 2. Baking-powder biscuits and breakfast cakes................ | 6 | 7. "Dinner-pail" lunches.......... | 8 |
| | | 8. School-children's lunches....... | 8 |
| 3. Pastry.......................... | 6 | 9. Sunday-night suppers........... | 6 |
| 4. Cake............................ | 8 | 10. Simple family meals............. | 8 |
| 5. Desserts....................... | 10 | 11. Cooking for infants and invalids. | 8 |

#### SEWING FOR HOUSEKEEPERS.

| | Lessons. | | Lessons |
|---|---|---|---|
| 12. Shirt waists..................... | 8 | 20. Mending and repairing.......... | 8 |
| 13. Fancy waists..................... | 12 | 21. Use of sewing-machine attachments....................... | 6 |
| 14. Skirts........................... | 12 | Can you use the tucker, ruffler, hemmer, and binder which belong to your sewing machine? | |
| 15. Unlined dresses................. | 16 | | |
| 16. Underwear....................... | 10 | | |
| 17. Baby clothes.................... | 12 | | |
| 18. Children's clothes.............. | 16 | 22. White embroidery............... | 10 |
| 19. Household sewing (bed linen, table linen, etc.).............. | 8 | 23. Embroidery for gowns.......... | 10 |

### CLEANING AND FINE LAUNDRY WORK FOR HOUSEKEEPERS.

| | Lessons. |
|---|---|
| 24. Washing blankets and flannels.. | 4 |
| 25. Laundering shirt waists.......... | 4 |
| 26. Fine starching and ironing...... | 6 |
| 27. Removing stains................ | 4 |
| 28. Cleaning........................ | 6 |
| 29. Cleaning solutions.............. | 4 |

### APPLICATION BLANK.

Date.................

Name ............, Address .................., Occupation ..................

Courses desired (give both name and number)...................................

.......................................................................................

### (B) At the Housekeeping Center, 96½ View Street.

DO YOU WANT TO KNOW
HOW TO COOK
MEAT?
VEGETABLES?
SOUP?
BREAD?
CAKE?
BREAKFAST?
DINNER?
SUPPER?

HOW TO SEW
SHIRT WAISTS?
DRESSES?
SKIRTS?
UNDERWEAR?
CHILDREN'S CLOTHING?
HOUSEHOLD?
SEWING?
MENDING?

THESE CLASSES ARE FREE.
THEY ARE FOR YOU.

If you wish to belong, come and put your name in on *Thursday* or *Friday*, 26th to 27th, 3 to 4.30 p. m.

There is another class of women whom the vocational school can serve—the "prospective housekeepers." This class is made up of two groups—one, house daughters who have finished their regular school training, and the other and larger group, young women who are in various kinds of employment during the day. All these young women have an immediate prospect of homes of their own, and to them benefit from cooking instruction is no longer a deferred value. While the girls in this group are more mature than the regular vocational school pupils, their basis of experience is limited as compared with the housekeeper and their need of instruction is general rather than specific. The short-unit course is also the best method of teaching these girls, but the units should be organized with more regard to the preparation of meals than of single articles of food. These courses should be given in day and evening classes according to the demands of the registration. This registration may be secured by the mailing of circulars and also by posters placed in stores, factories, and offices where women are employed.

### SAMPLE UNIT COURSES FOR PART-TIME AND EVENING CLASSES.[1]

The following are sample unit courses which may be used for part-time instruction in home making for housekeepers. These courses are only suggestive, and this is in no sense a complete list of work which might be given in this subject. The courses themselves and the number of lessons in each should be arranged to meet the needs of the pupils.

| | Lessons. |
|---|---|
| 1. Meat | 8 |
| 2. Soups and stews | 10 |
| 3. Left overs | 8 |
| 4. Meat substitutes | 16 |
| 5. Fish | 6 |
| 6. Clams and oysters | 5 |
| 7. Vegetables | 8 |
| 8. Bread and rolls | 6 |
| 9. Muffins and quick bread | 5 |
| 10. Cake | 8 |
| 11. Cookies | 6 |
| 12. Cold desserts | 6 |
| 13. Hot desserts | 6 |
| 14. Frozen desserts | 5 |
| 15. Pastry | 6 |
| 16. Salads | 8 |
| 17. Sandwiches | 4 |
| 18. Eggs | 4 |
| 19. Canning and preserving | 12 |
| 20. "Dinner pails" | 6 |
| 21. School children's lunches | 6 |
| 22. Sunday-night suppers | 8 |
| 23. Breakfasts | 5 |
| 24. Fireless cooker and paper-bag cooking | 6 |
| 25. Kosher cooking | 10 |
| 26. Italian cooking | 10 |
| 27. Infant feeding | 5 |
| 28. Meals for children from 2 to 6 years old | 5 |
| 29. Cooking for invalids and special diets | 8 |
| 30. Marketing | 6 |
| 31. Table setting and serving | 4 |

## V. TAKING INSTRUCTION TO THE PUPIL.

In the attempt to place instruction in cooking within the reach of all women, not only must local needs be studied and careful and systematic measures be taken to supply them, but in many cases means must be devised to take this instruction to the consumer.

In a city of any size distances are often prohibitive. A working woman has neither time nor strength to reach a distant class; neither can she always afford car fare. Instruction in cooking for this woman must be easily accessible. A number of small centers, located where registration is heavy, will serve better than one large central plant. It has been found possible not only to open classes where they can be conveniently reached, but also to take instruction into places of employment and into the home itself. Special rooms for this purpose can often be fitted up at small cost in the basements of regular school buildings, and sometimes rooms well adapted to such work can be rented in convenient locations.

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[1] Many of these short-unit courses are in operation in the evening schools of Rochester, N. Y., Albany, N. Y., Worcester, Mass., Lawrence, Mass., and many other places. An extended list of such places may be found in Bulletin No. 17 of the National Society for the Promotion of Industrial Education.

In one instance instruction was taken to the place of employment by using the "cookhouse" which a cotton mill had built for the purpose of preparing employees' dinners. The use of this building was secured for one night a week by the local vocational school. Posters were placed in the mill inviting the women employees to meet here and cook their own supper with the help of a teacher from the school. Two sample menus, with their cost, were given on this poster. Registration was taken through the foreman, and more women applied than it was possible to accommodate. At the close of the mill day as many women as could get into the "cookhouse" came directly from their work and cooked supper under the direction of the teacher. The mill furnished the kitchen and equipment, the school supplied the teacher, and the pupils paid the cost of material, which was never over 12 cents a person. This method of taking instruction to the pupil proved very useful. There was no falling off in interest and attendance, and the women asked to have the classes continued permanently. Two sample menus are given to show the kind of cooking in which these women were interested.

SUPPER No. 1.

Cheese pudding. Baked onions. Cold slaw. Peanut cookies. Coffee.

| | |
|---|---|
| Cheese pudding | $0.48 |
| Baked onions | .10 |
| Cold slaw | .15 |
| Cookies | .40 |
| Coffee | .28 |
| Fuel | .10 |
| Total cost | 1.51 |
| For "family" of 14— | |
| Individual cost | .11 |

SUPPER No. 2.

Codfish in tomato sauce. Cereal muffins. Dried apricot shortcake. Cocoa.

| | |
|---|---|
| Codfish in tomato sauce | $0.30 |
| Muffins | .24 |
| Shortcake | .20 |
| Cocoa | .28 |
| Fuel | .08 |
| Total cost | 1.10 |
| For "family" of 14— | |
| Individual cost | .08 |

## COOPERATION WITH THE HOME.

It is believed by some that the school will not reach an efficient method of teaching cooking until the instruction is given under actual domestic conditions in the home itself. Instruction in the schoolroom, it is maintained, can at best be made only an imitation of home conditions and, therefore, can never be thoroughly efficient.

In some instances, at least, instruction in cooking has been actually taken by the school into the home of the pupil. In one particular case 15 young women who wished to form a class volunteered the use of their home kitchens.[1] They had 10 lessons in the preparation of breakfasts. The class met at the homes of the members, and both cooked and served breakfasts planned for families in moderate circumstances. The pupils not only had the experience of cooking and serving these breakfasts, but of actually doing the work under the conditions of 10 different kitchens. The success of this particular class was largely due to the ability of the teacher in securing the cooperation of the pupils and a spirit of independent work.

While this was an evening class composed of girls employed during the day, the experiment is of interest and may be regarded as prophetic of home-making instruction in the future. At the present time no instance is known of the continuous and systematic giving of instruction in the home of the day-school pupil. As a move in this direction some schools have tried the experiment of giving credit to the pupil for work done in the home.[2]

In a few cases the school has gone a step farther in an attempt to utilize the home as a place of practice for the pupil. Different household tasks are gone over in detail as preliminary preparation, and practice is given in certain processes, such as making pie crust or planning a meal. The girl then does this work in her own home as a part of the family housekeeping, and brings to the school a written report signed by her parent to denote whether the service rendered has met the family requirements.

For a satisfactory working out of this scheme, it will be desirable for the school to be in very close touch with the families and home conditions of the pupils. The parent's signature to the written report is only one means of securing this cooperation, which must come largely through the teacher herself. For this purpose she will need to have time assigned for more or less direct supervision of the girl's home work. This supervision will generally take the form of friendly calls. Since these calls are to be made in that most inaccessible of places—another woman's kitchen—the success of this method will depend on the personality of the teacher and the tact and discretion which she can use in dealing with the girls' mothers.

The card reproduced below has been used to secure the interest and cooperation of the girl's mother. Credit is given for work done at home when that space is filled out and properly signed. In this way the mother may know what the girl is being taught in the school and what she may be expected to know when called upon to help in the home. The teacher is also informed as to how much opportunity the girl has to put in practice what she is taught in the school.

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[1] Wakefield Evening Industrial School, Wakefield, Mass.

[2] The following, among others: Boardman Apprentice Shops, New Haven, Conn.; Belmont, N. Y.; Sinclairville, N. Y.; Lowville, N. Y.; and Greigsville, N. Y.

**COOKING RECORD.**

Pupil............................ Week ending........................
................School............................Home..............
..................................................................
..................................................................
..................................................................
..................................................................
..................................................................
..................................................................
..................................................................
Quality of work.................... Quality of work....................
Attitude toward work............... Attitude toward work...............
Teacher's signature................ Parent's signature.................

There would seem to be certain objections to this practice. When a girl works at home she is very much under the influence of her mother's methods and example, and in some cases this is most undesirable. If the great part of her actual experience is to be in her own home, the experience will be limited to supplying the needs of a few people, and to the use of such utensils as the home affords. The equipment of the average kitchen is also a handicap. It is in most cases a hit-or-miss collection of utensils with which the housekeeper is already familiar, rather than the result of an intelligent search for those which will lighten labor. A woman will refuse a time-and-labor-saving device for no other reason than that it was not in her mother's kitchen. The school is prepared to give the girl a greater variety of experience with utensils and material than the average home can afford. When working in the school the girl learns from the experience of the other girls. The excited discussions carried on in trade-school kitchens are sufficient evidence that the pupils are quick to observe, and that they form their own opinions.

## VI. THE KITCHEN AND ITS EQUIPMENT.

Much of the inefficiency of trade instruction in cooking is due to inadequate or unsuitable equipment. In some schools the laboratory equipment previously discussed has been adopted outright or with modifications. In other schools the cooking department has as its basis the home kitchen, but doubled or tripled in size and equipment until it will accommodate 15 to 20 girls. In a few instances an institutional equipment has been installed with all the "machinery" for cooking in large quantities. Instruction given under any of these circumstances leaves much to be desired in efficiency and direct relation to the job for which it is supposed to train.

An important factor in training the girl "on the job," as has been previously stated, is to give her this training under conditions which are real; that is, under conditions which at least approximate those of the actual "job." It is these conditions which should determine the arrangement and equipment of the kitchen in the vocational school. In this connection it is a serious mistake to ignore a fundamental difference between home making and such other trades as millinery and power-machine operating, for instance. As compared with the conditions of employment in these industries, home making is carried on in comparative solitude. In other workrooms of the vocational school the conditions are normal; that is, they are essentially those of the industry where a number of women work close together in a certain partnership of interest. The mistaken attempt to carry this organization over into the cooking department results in a variety of arrangements, whereby a single kitchen is made to accommodate 15 to 20 girls. Under no circumstances can a kitchen equipped even for 15 girls be made a reproduction of home conditions.

The "job" for which the girl is to be trained is the home; therefore the school must approximate the "trade" conditions under which this work is commonly done. The kitchen, for example, should be about the same type as that found in the average home, and the equipment and utensils such as could be afforded by the housekeeper in ordinary circumstances. Can this be done under school conditions? How will it be possible to handle classes of sufficient size to prevent the cost of instruction from being prohibitive?

In the "unit" kitchen has been found a method which approaches the requirements of giving actual training under home conditions. By this method the home kitchen is made the unit of construction, the units being repeated as often as the number of pupils demands. These kitchens are small rooms like the ordinary tenement kitchen, and are furnished with sink, gas stove, and the necessary utensils. The equipment should be simple, planned to put the girl on working terms with the kitchen at home. The rooms are built with only three walls, the fourth side being open on the hall. By this arrangement one instructor can supervise the work in a number of kitchens. A class of 15 can be taken care of, each kitchen accommodating 5 girls, as in the New Bedford Industrial School, New Bedford, Mass., or in the Boardman Apprentice Shops, New Haven, Conn.

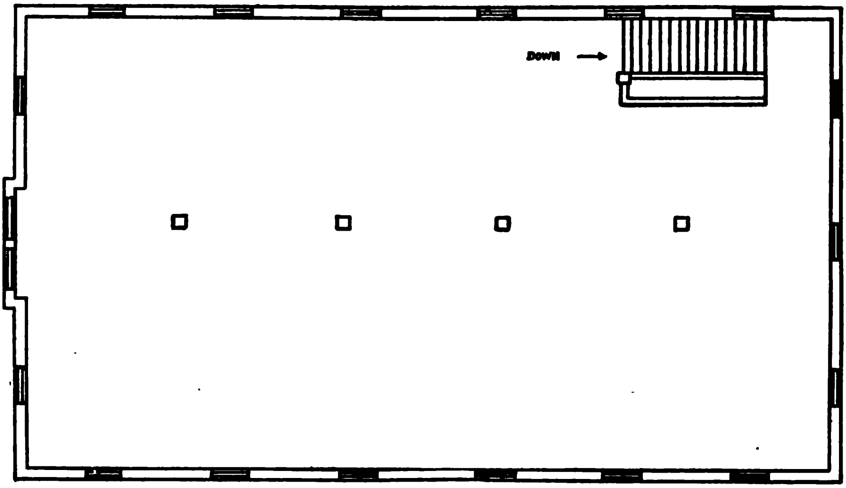


FIG. 1.—School No. 1. Space Utilized for Unit Kitchens.

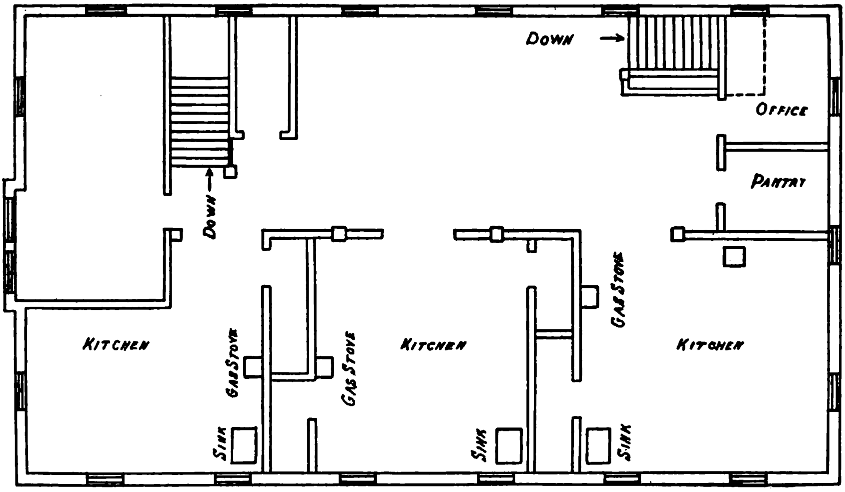


FIG. 2.—School No. 1. Floor Plans of Unit Kitchens.

This plan does not require a specially constructed building. Under present conditions the trade school is usually housed in any quarters it can get, from a factory to a dwelling house. Any plan, therefore, which is not adaptable to the most unpromising conditions can not be a real help in the solution of this problem. If a plan calls for extensive rebuilding, its usefulness is extremely limited.

Figures 1 to 4 show floor plans of two buildings where unit kitchens have been installed. The kitchens shown in figure 2 and plate 1 are on the third floor of a carriage storehouse, which is the building devoted to the girls' vocational school. Since this building was not regarded as a permanent location for the school, the work was done in the cheapest possible fashion. Light studding was put up, and the interior finish was wall board. All work except painting and plumbing was done by the boys' department of the school. This construction was cheap, attractive, and satisfactory. Figure 3 shows the floor space in a brick school building before it was devoted to trade-school purposes, and figure 4 shows how it was rearranged for unit kitchens. A more permanent and expensive construction was employed here with no particular gain in appearance or serviceability.

If these kitchens are equipped according to the suggestions in the detailed list, pupils will have much practical work in determining comparative desirability and cost of kitchen furnishings. For instance, three gas stoves were bought, but of three different makes; an iron sink was placed in one kitchen, a white enamel sink in the second, and a stone sink in the third; the refrigerators are also of different kinds. The same idea was followed in selecting the utensils; both glass and wooden rolling-pins are included in the list, and prices are given on enamel ware of three different grades.

The equipment given is the one used for the three kitchens shown in plate 2A. This with the restaurant equipment which follows, answered the purpose of this particular vocational school—to give training in cooking for home-making purposes to all girls in the school, and to women desiring part-time instruction by means of the unit course in day and evening classes; also to market this product in the school lunch room, where 150 people could be served. Other conditions would require variation in this equipment to meet peculiar needs. The specifications and prices are those of the city where the goods were bought. In every case prices on kitchen equipment are regular retail prices. Discounts obtained on quantity have been omitted. The costs of restaurant dishes, glass, and silver are the regular prices of a wholesale house dealing in hotel ware.

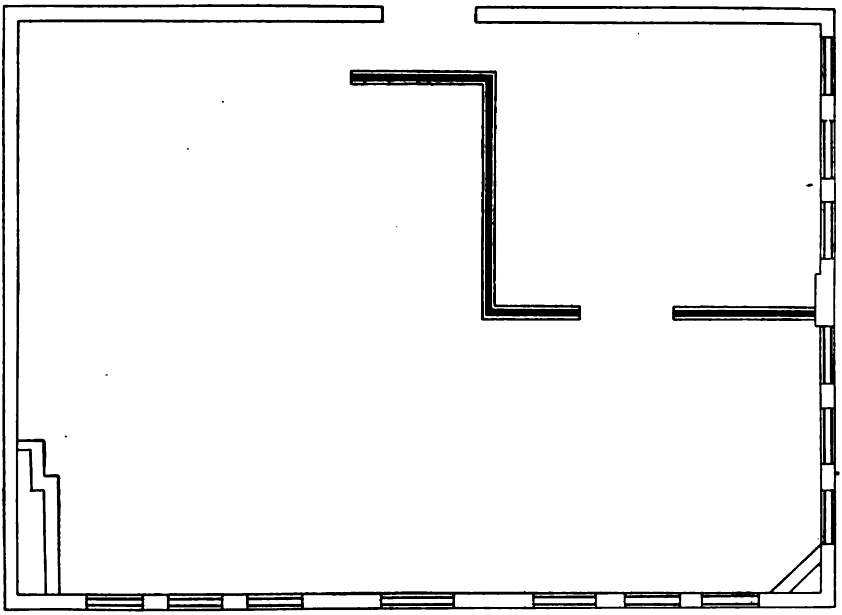


FIG. 3.—School No. 2. Space utilized for unit kitchens,

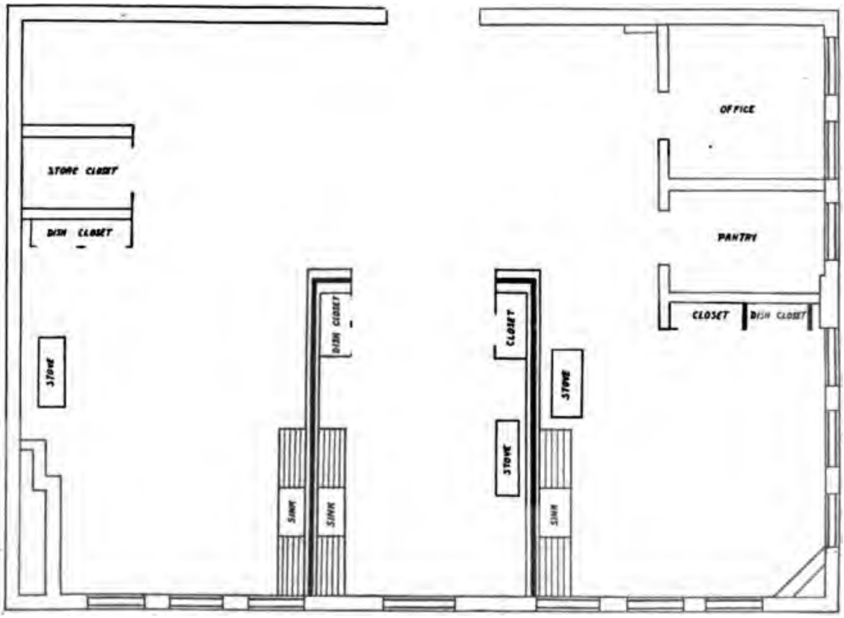


FIG. 4.—School No. 2. Floor plans of unit kitchens.

# EQUIPMENT FOR THREE UNIT KITCHENS.

## 1. EQUIPMENT FOR COMMON USE BETWEEN THE THREE KITCHENS.

| | Cost. |
|---|---|
| 1 refrigerator | $40.00 |
| 1 refrigerator, white, all steel | 47.00 |
| 2 refrigerator pans, galvanized iron, large size | 1.50 |
| 1 clothes line | .75 |

| | Cost. |
|---|---|
| 1 wheeled table 30 inches high, top 3 by 2 feet, shelf 6 feet from floor, 2-foot rail around top and shelf, the whole finished with spar varnish | $10.00 |
| Total | 99.25 |

## 2. STOREROOM EQUIPMENT FOR COMMON USE

| | Cost. |
|---|---|
| 12 drip pans, 17 by 12 inches | $4.80 |
| 6 pudding dishes, Guernsey ware, 9½ inches outside measure | 2.40 |
| 6 pudding dishes, Guernsey ware, 10½ inches outside measure | 3.36 |
| 12 crocks, with covers, 4-gallon | 9.60 |
| 6 crocks, with covers, 2-gallon | 3.60 |
| 1 teapot, earthenware, 2-quart | 2.50 |
| 150 casseroles, red clay, 7-ounce, without covers, 4 inches outside | 30.00 |
| 50 ramekins, Guernsey, white inside | 3.50 |
| 24 custard cups, Guernsey, white inside | 1.80 |
| 6 casseroles, Guernsey, round, with cover, 12 inches outside, No. 10 | 12.00 |
| 3 casseroles, Guernsey, round, with cover, 9 inches outside, No. 69 | 3.60 |

| | Cost. |
|---|---|
| 1 set measurers, 1, 2, 4, 8 quart, ½ bushel, bound, varnished, and sealed | $2.00 |
| 1 double roasting pan | 2.00 |
| 1 North Pole ice-cream freezer | 2.25 |
| 1 White Mountain ice-cream freezer | 2.90 |
| 1 Alaska ice-cream freezer | 2.68 |
| 1 bread cutter | 4.00 |
| 2 cake closets, white japanned, 3 shelves | 6.20 |
| 2 bread boxes, white japanned | 4.50 |
| 1 bread mixer, 8 loaves | 2.00 |
| 1 hammer, 8-ounce | .60 |
| 14 dozen glass cups, plain, with handle | 7.70 |
| 1 coffee pot, copper bottom | 2.50 |
| 1 stepladder, 4 steps | 1.20 |
| Total | 115.69 |

## 3. EQUIPMENT FOR KITCHEN NO. 1

| | Cost. |
|---|---|
| 1 gas stove | $33.00 |
| 1 sink, Alberine stone, with back and cap, 36 by 22 inches, faucets and connections included | 23.00 |
| 1 table, pine, 5 by 29 feet, with drawer | 5.00 |
| 4 factory stools, 24-inch | 2.07 |

### WOODENWARE.

| | |
|---|---|
| 1 mop handle | .35 |
| 1 towel rack, 5 arms | .15 |
| 1 set flour buckets, 3 in a set | 1.95 |
| 4 pastry boards, 20 by 30 inches, cleated ends. | 2.00 |
| 1 chopping bowl, 12-inch, round, oiled | .25 |
| 1 chopping bowl, 14-inch, round, oiled | .50 |
| 1 rolling pin, 10 by 1½ inches, revolving handles | .25 |
| 5 doughnut cutters | .90 |
| 1 ham board, 10 by 14 inches | .30 |
| 1 dish rack, folding | .30 |
| 1 vegetable brush, 1½-inch, twine bound | .45 |
| 1 scrub brush, solid back | .20 |
| 1 potato masher | .10 |
| 1 cake spoon, 12-inch slit bowl | .24 |
| 2 cake spoons, 12-inch, solid bowl | .20 |

### IRONWARE.

| | |
|---|---|
| 1 fry pan, No. 7 size | .35 |
| 1 fry pan, No. 8 size | .38 |
| 1 griddle, medium size, with side handle, No. 8 | .35 |
| 1 frying kettle, with basket | 1.90 |

### EARTHENWARE.

| | |
|---|---|
| 3 nests of bowls, 5 in a nest (brown and white) Guernsey | 7.35 |
| 1 platter, 12-inch white ware | .21 |
| 1 platter, 18-inch white ware | .54 |
| 2 pitchers, Portland style, 2½-quart | .80 |

### GLASS.

| | Cost. |
|---|---|
| 12 measuring cups, thirds and quarters | $1.20 |
| 4 lemon squeezers, lipped trays, No. 3 | .40 |
| 2 glass rolling pins, 12 by 3 inches | .90 |
| 2 jugs, 1-gallon | 1.00 |
| 8 jars with flat screw tops, 1-quart | .80 |
| 8 jars with flat screw tops, 1-pint | .80 |
| 1 butter jar, flat top, medium | .30 |

### CUTLERY.

| | |
|---|---|
| 6 spatulas, 6-inch ting, riveted in handle | 3.00 |
| 8 case knives, medium | .84 |
| 8 forks, three prong, medium | .84 |
| 6 vegetable knives, riveted handle | .90 |
| 6 vegetable knives, ferrule driven in handle | .60 |
| 1 center-cut bread knife | .50 |
| 1 butcher knife, 6-inch | .35 |
| 1 bread knife, 8-inch | .45 |
| 1 mincing knife, 2 tings in handle | .35 |
| 1 flesh fork, wooden handle | .25 |
| 1 ice pick, 6 inches long | .10 |
| 4 knives, Lasher silver | .66 |
| 4 forks, Lasher silver | .46 |
| 1 steel for sharpening | .80 |

### SPOONS.

| | |
|---|---|
| 2 sets aluminum measuring spoons ¼, ⅓, ½ | .40 |
| 1 aluminum spoon, 13 inches long | .35 |
| 1 aluminum spoon, 16 inches long | .40 |
| 12 teaspoons, Lasher silver | .65 |
| 8 tablespoons, Lasher silver | .94 |

### AGATE OR ENAMEL WARE.

| | |
|---|---|
| 1 teakettle, seamless, 5-quart | 1.10 |
| 1 saucepan, 2-quart, lipped | .25 |
| 1 saucepan, 3-quart, lipped | .35 |
| 1 saucepan, 4-quart, lipped | .40 |

## 3. EQUIPMENT FOR KITCHEN NO. 1—Continued.

AGATE OR ENAMEL WARE—continued.

| | Cost. |
|---|---|
| 3 enamel covers for the above | $0.70 |
| 1 rice or milk boiler, 1-quart, with enamel cover | .85 |
| 1 rice or milk boiler, 2-quart, with enamel cover | .00 |
| 1 rice or milk boiler, 3-quart, with enamel cover | 1.25 |
| 1 rice or milk boiler, 4-quart, with enamel cover | 1.60 |
| 1 stove pot, 14-quart, with enamel cover | 1.70 |
| 4 Berlin kettles, 6-quart, with enamel cover | 3.12 |
| 2 pie plates, large, 11-inch diameter, 12/4 inches deep | .48 |
| 12 pie plates, small, 9-inch diameter, ¾ inch deep | 2.16 |
| 1 wash bowl, 12-inch diameter | .30 |
| 1 dish pan, 16½-inch diameter, 5 inches deep | 1.00 |
| 1 ladle with hooked handle | .15 |
| 1 colander, No. 2 size | .50 |
| 1 coffee pot, 4-quart, enamel cover | .80 |
| 1 corner sink strainer | .25 |

TINWARE.

| | |
|---|---|
| 1 strainer, 4-inch, with rest and wooden handle | .10 |
| 1 strainer, fine, 6 inches in diameter | .25 |
| 1 strainer, coarse, 6 inches in diameter | .25 |
| 1 soap shaker, large | .15 |
| 7 cake coolers, 10 by 14 inches | 1.05 |
| 1 dish drainer, heavy wire | .25 |
| 2 potato ricers | .25 |
| 1 funnel, large, 7-inch | .35 |
| 1 funnel, small, 4½-inch | .20 |
| 1 flour sifter | .25 |
| 6 bread tins, No. 1 sponge | 1.20 |
| 2 cake pans, No. 2 square biscuit | .60 |

TINWARE—continued.

| | Cost. |
|---|---|
| 2 cake pans, No. 1 square biscuit | $0.50 |
| 1 grater, No. 2 | .10 |
| 1 grater, No. 2 (different make) | .10 |
| 1 colander, 12-inch | .60 |
| 1 cake turner, square | .10 |
| 1 quart measure, graduated | .20 |
| 1 corer | .10 |
| 1 milk-bottle opener | .05 |
| 12 biscuit cutters, 4 each of sizes Nos. 1, 2, and 3 | 1.20 |
| 1 skimmer ladle | .10 |
| 1 wire dishcloth | .10 |
| 2 sets muffin tins, 12 in a set | 1.00 |
| 1 angel-cake tin, tube, removable bottom | .20 |

MISCELLANEOUS.

| | |
|---|---|
| 1 garbage pail, with cover, galvanized iron | .78 |
| 1 rubbish can, galvanized iron | 2.00 |
| 1 scrub pail, 12-quart, heavy, galvanized iron | .50 |
| 1 twine mop, medium, 16-ounce | .35 |
| 1 broom | .50 |
| 1 can opener, with corkscrew | .10 |
| 3 egg beaters, No. 1 | 1.50 |
| 2 egg beaters | .30 |
| 1 set spice boxes, 5 in a set, white enamel | .45 |
| 1 dustpan | .35 |
| 1 sanitary dustpan | .50 |
| 1 dustpan brush | 1.00 |
| 1 dustpan brush, No. 3 | .35 |
| 1 cream whip, 1-quart | .50 |
| 1 ice-cream disher, 10 portions to quart | 1.50 |
| 1 food chopper | 1.00 |
| 4 asbestos mats, round, 10-inch, tin-bound | .40 |
| 4 abestos mats, oval, 12-inch, tin-bound | .60 |
| Total | 161.12 |

## 4. EQUIPMENT FOR KITCHEN NO. 2.

| | Cost. |
|---|---|
| 1 gas stove | $40.00 |
| 1 sink, iron enamel, with integral back, faucets and connections included | 15.00 |
| 1 composition top table | 10.00 |
| 1 table, pine, 5 feet by 29 inches, with drawer | 5.00 |

WOODENWARE.

| | |
|---|---|
| 1 mop handle | .35 |
| 1 towel rack, 5-arm | .15 |
| 1 set flour buckets, 3 in a set | 1.95 |
| 4 pastry boards, 20 by 30 inches, cleated ends | 2.00 |
| 1 rolling pin, 10 by 1½, revolving handles | .25 |
| 1 chopping bowl, round, 12-inch, oiled | .25 |
| 1 chopping bowl, round, 14-inch, oiled | .50 |
| 6 doughnut cutters | .90 |
| 1 ham board, 10 by 14 inches | .30 |
| 1 dish rack, folding | .30 |
| 1 vegetable brush, 1½-inch, twine-bound | .45 |
| 1 potato masher | .10 |
| 2 cake spoons, 12-inch, slit bowl | .24 |
| 2 cake spoons, 12-inch, solid bowl | .20 |
| 1 scrub brush, solid back | .20 |

IRON WARE.

| | |
|---|---|
| 1 fry pan, size No. 7 | .20 |
| 1 fry pan, size No. 8 | .38 |
| 1 griddle, medium size, with side handle, No. 8 | .35 |
| 1 frying kettle with basket, No. 0100 L. & G. Mfg. Co | 1.90 |

EARTHEN WARE.

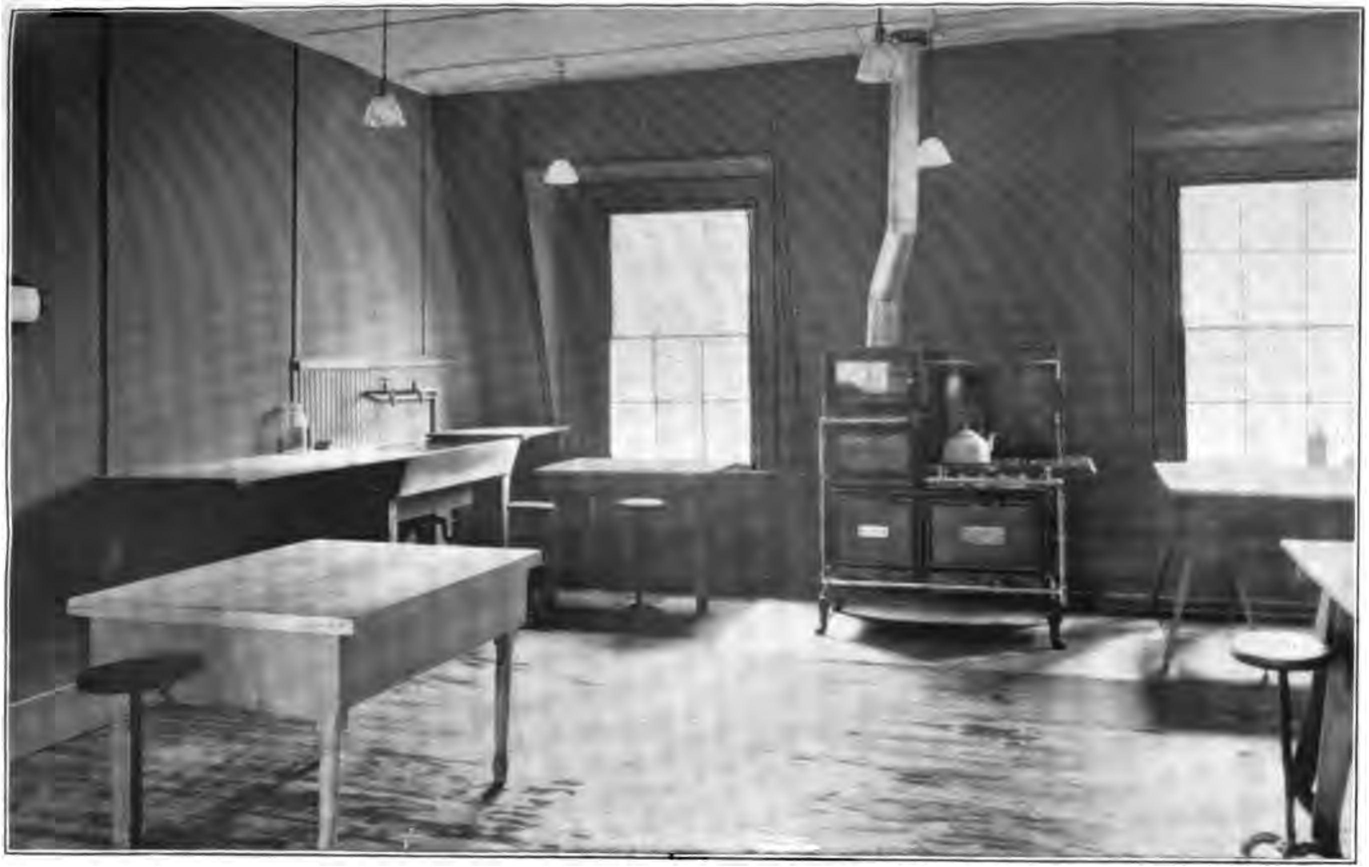
| | Cost. |
|---|---|
| 3 nests of bowls, 4 in set, white ware | $6.90 |
| 2 milk pitchers, white ware, C. C., 2½-quart | .66 |
| 1 platter, white ware, C. C., 12-quart | .21 |
| 1 platter, white ware, C. C., 18-quart | .54 |

GLASS.

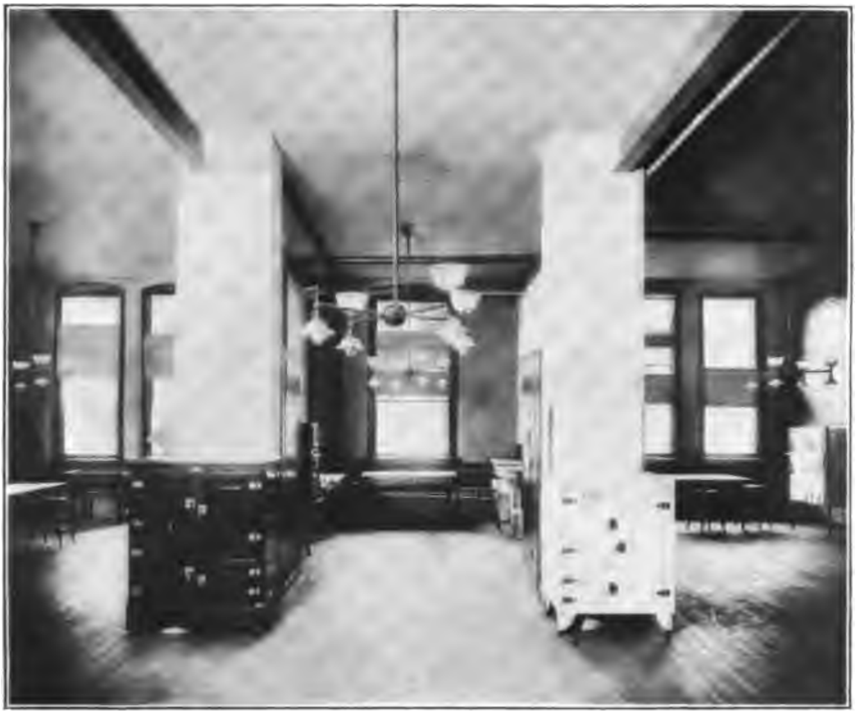
| | |
|---|---|
| 12 measuring cups, thirds and quarters | 1.20 |
| 4 lemon squeezers, with lipped trays No. 3 | .40 |
| 2 glass rolling pins, 12 by 3 inches | .90 |
| 2 jugs, 1-gallon | 1.00 |
| 8 jars with flat screw tops, 1-quart | .80 |
| 8 jars with flat screw tops, 1-pint | .80 |
| 1 butter jar, flat top, medium | .30 |

CUTLERY.

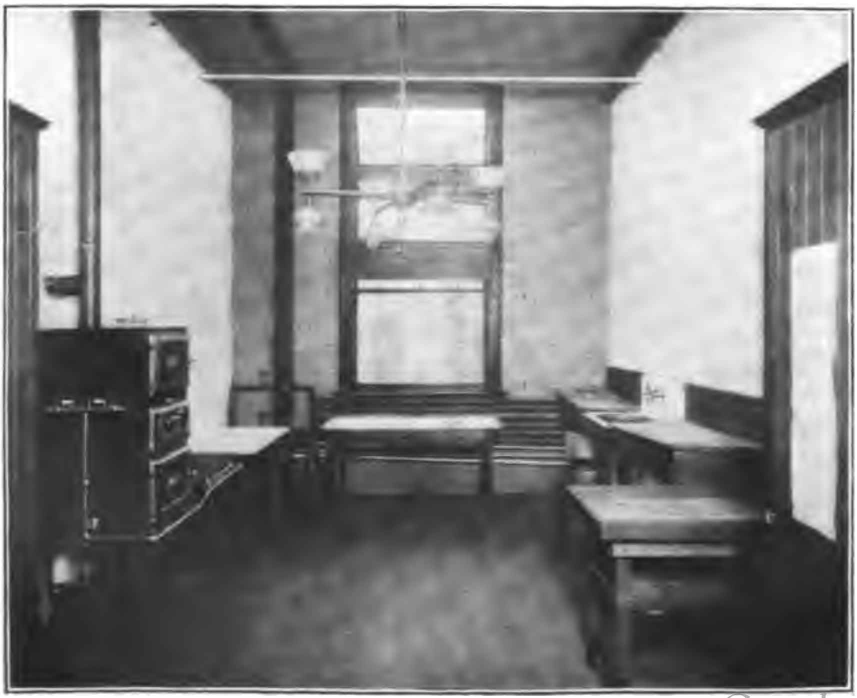
| | |
|---|---|
| 6 spatulas, 6-inch, ting riveted in handle | 3.00 |
| 8 case knives, medium | .84 |
| 8 forks, three-prong, medium | .84 |
| 6 vegetable knives, riveted handle | .90 |
| 6 vegetable knives, ferrule driven in handle | .60 |
| 1 center-cut bread knife No. 127 | .50 |
| 1 butcher knife, 6-inch | .35 |
| 1 bread knife, 8-inch | .45 |
| 1 mincing knife, 2 tings in handle | .35 |
| 1 flesh fork, wooden handle | .25 |
| 1 ice pick, 6 inches long | .10 |
| 1 French meat carver, 10 inches long | 1.25 |
| 1 lamb cleaver, 8-inch blade | 1.15 |



SCHOOL NO. 1. FINISHED UNIT KITCHEN.



*A.* SCHOOL NO. 2. UNIT KITCHENS.



*B.* DETAIL OF ONE KITCHEN SHOWN IN *A.*

## 4. EQUIPMENT FOR KITCHEN NO. 2—Continued.

| CUTLERY—continued. | Cost. |
|---|---|
| 4 knives, Lasher silver | $0.66 |
| 2 forks, Lasher silver | .46 |

### SPOONS.

| | |
|---|---|
| 2 sets aluminum measuring spoons, ¼, ½, ¾ | .40 |
| 1 aluminum spoon, 13 inches long | .35 |
| 1 aluminum spoon, 16 inches long | .40 |
| 12 teaspoons, Lasher silver | .65 |
| 8 tablespoons, Lasher silver | .94 |

### AGATE OR ENAMEL WARE.

| | |
|---|---|
| 1 teakettle, seamless, 5 quarts | .60 |
| 1 saucepan, 2-quart, lipped | .15 |
| 1 saucepan, 3-quart, lipped | .18 |
| 1 saucepan, 4-quart, lipped | .22 |
| 3 enamel covers for the above | .47 |
| 1 rice or milk boiler, 1-quart, with enamel cover | .53 |
| 1 rice or milk boiler, 2-quart, with enamel cover | .60 |
| 1 rice or milk boiler, 3-quart with enamel cover | .75 |
| 1 rice or milk boiler, 4-quart, with enamel cover | .95 |
| 1 stove pot, 14-quart, with enamel cover | 1.10 |
| 4 Berlin kettles, 6-inch, with enamel cover | 1.80 |
| 2 pie plates, large, 11 inches diameter, 1½ inches deep | .36 |
| 12 pie plates, small, 9 inches diameter, 1½ inches deep | 1.44 |
| 1 washbowl, 12 inches diameter | .20 |
| 1 dishpan, 14-quart, 16½ by 5 inches | .59 |
| 1 corner sink strainer | .25 |
| 1 ladle with hooked handle | .10 |
| 1 colander, No. 2 size | .33 |

### TINWARE.

| | |
|---|---|
| 1 strainer, 4-inch, with rest and wooden handle | .10 |
| 1 fine strainer, 6 inches diameter | .25 |
| 1 coarse strainer, 6 inches diameter | .25 |
| 1 extension strainer | .10 |
| 1 large soap shaker | .15 |
| 7 cake coolers, 10 by 14 inches | 1.05 |
| 1 dish drainer, heavy wire | .25 |
| 2 potato ricers | .50 |

| TINWARE—continued. | Cost. |
|---|---|
| 3 layer-cake tins, round, medium | $0.30 |
| 1 funnel, large, 7-inch | .35 |
| 1 funnel, small, 4½-inch | .20 |
| 1 flour sifter | .25 |
| 6 bread tins, No. 1 sponge | 1.20 |
| 2 cake pans, No. 2 square biscuit | .60 |
| 2 cake pans, No. 1 square biscuit | .50 |
| 1 grater, No. 2 | .10 |
| 1 grater, No. 2 (different make) | .10 |
| 1 colander, 12-inch | .60 |
| 1 cake turner, square | .10 |
| 1 quart measure, graduated | .20 |
| 1 corer | .10 |
| 12 biscuit cutters, 4 each of sizes Nos. 1, 2, and 3 | 1.20 |
| 1 skimmer, flat | .10 |
| 1 skimmer, ladle | .10 |
| 1 milk-bottle opener | .05 |
| 1 wire dishcloth | .10 |
| 1 nutmeg grater | .10 |
| 1 angel-cake tin, tube, removable bottom | .20 |
| 2 sets muffin tins, 12 in a set | 1.00 |

### MISCELLANEOUS.

| | |
|---|---|
| 1 garbage pail with cover, galvanized iron No. 03 | .78 |
| 1 rubbish can | 2.00 |
| 1 scrub pail, heavy, galvanized iron, 12-quart | .50 |
| 1 twine mop, 16-ounce, medium | .35 |
| 1 broom | .50 |
| 1 can opener, with corkscrew | .10 |
| 3 egg beaters | 1.50 |
| 2 egg beaters (different makes) | .30 |
| 1 cream whip, 1-quart | .50 |
| 1 set spice boxes, white enamel, 5 in a set | .45 |
| 1 aluminum tea ball | .20 |
| 1 dustpan | .35 |
| 1 sanitary dustpan | .50 |
| 1 dustpan brush | 1.00 |
| 1 dustpan brush (different size) | .35 |
| 1 food chopper | 1.00 |
| 4 asbestos mats, round, 10-inch, tin bound | .40 |
| 4 asbestos mats, oval, 12-inch, tin bound | .60 |
| 1 ice-cream disher, 10 portions to the quart | 1.50 |
| Total | 142.50 |

## 5. EQUIPMENT FOR KITCHEN NO. 3.

| | Cost. |
|---|---|
| 1 gas stove | $38.00 |
| 1 cast-iron sink, with back, faucets included | 7.00 |
| 1 table, pine, 5 feet by 29 inches, with draw | 5.00 |
| 4 factory stools, 24-inch | 2.07 |

### WOODENWARE.

| | |
|---|---|
| 1 pastry board, 20 by 30 inches, cleated ends | .60 |
| 1 rolling pin, 10 by 7½ inches, revolving handles | .25 |
| 1 round chopping bowl, 12-inch, oiled | .25 |
| 1 round chopping bowl, 14-inch, oiled | .50 |
| 2 wooden cake spoons, 12-inch, slit bowl | .24 |
| 2 wooden cake spoons, 12-inch, solid bowl | .20 |
| 1 potato masher | .10 |
| 6 doughnut cutters | .90 |
| 1 ham board, 10 by 14 inches | .30 |
| 1 dish rack, folding | .30 |
| 1 vegetable brush, 1½-inch, twine bound | .45 |
| 1 set flour buckets, 3 in a set | 1.95 |
| 1 clotheshorse, 5 feet, 3-fold | .95 |

| WOODENWARE—continued. | Cost. |
|---|---|
| 1 towel rack, 5-arm | $0.15 |
| 1 mop handle | .35 |
| 1 scrub brush, solid back | .20 |

### IRONWARE.

| | |
|---|---|
| 1 fry pan, No. 7 size | .35 |
| 1 fry pan, No. 8 size | .38 |
| 1 griddle, medium size, with side handle, No. 8 | .35 |
| 1 fry kettle with basket | .90 |

### EARTHERNWARE.

| | |
|---|---|
| 3 nests of bowls, 4 in a set, yellow ware | 4.56 |
| 2 milk pitchers, white ware, 2½-quart | .66 |
| 1 platter, 12-inch, white ware | .21 |
| 1 platter, 18-inch, white ware | .54 |

### GLASSWARE.

| | |
|---|---|
| 12 measuring cups, thirds and quarters | 1.20 |
| 4 lemon squeezers with lipped trays, No. 3 | .40 |
| 2 glass rolling pins, 12 by 3 inches | .90 |

## 4. EQUIPMENT FOR KITCHEN NO. 3—Continued.

### GLASSWARE—continued.

| | Cost. |
|---|---|
| 2 jugs, 1-gallon | $1.00 |
| 1 butter jar, flat top, medium | .30 |
| 8 jars, with flat screw tops, 1-quart | .80 |
| 8 jars, with flat screw tops, 1-pint | .80 |

### CUTLERY.

| | |
|---|---|
| 6 spatulas, 6-inch, ting riveted in handle | 3.00 |
| 6 case knives, medium | .84 |
| 8 forks, three-prong, medium | .84 |
| 6 vegetable knives, riveted handles | .90 |
| 6 vegetable knives, ferrule driven in handle | .60 |
| 1 bread knife, center cut | .50 |
| 1 bread knife, 8-inch | .45 |
| 1 butcher knife, 6-inch | .35 |
| 1 flesh fork, wooden handle | .25 |
| 1 mincing knife, 2 tings in handle | .35 |
| 1 ice pick, 6 inches long | .10 |
| 4 knives, Lasher silver | .66 |
| 4 forks, Lasher silver | .46 |

### SPOONS.

| | |
|---|---|
| 2 sets aluminum measuring spoons, ¼, ½, ¾ | .40 |
| 1 aluminum spoon, 13 inches long | .35 |
| 1 aluminum spoon, 16 inches long | .40 |
| 12 teaspoons, Lasher silver | .65 |
| 8 tablespoons, Lasher silver | .94 |

### AGATE OR ENAMEL WARE.

| | |
|---|---|
| 1 teakettle, seamless, 7-quart | 1.35 |
| 1 saucepan, 2-quart, lipped | .30 |
| 1 saucepan, 3-quart, lipped | .35 |
| 1 saucepan, 4-quart, lipped | .41 |
| 3 enamel covers for the above | .60 |
| 1 rice or milk boiler, 2-quart, with enamel cover | .98 |
| 1 rice or milk boiler, 3-quart, with enamel cover | 1.35 |
| 1 rice or milk boiler, 4-quart, with enamel cover | 1.65 |
| 4 Berlin kettles, 6-quart, with enamel cover | 3.60 |
| 1 Berlin kettle, 14-quart, with enamel cover | 1.75 |
| 2 pie plates, 11 inches diameter, 1½ inches deep | .60 |
| 12 pie plates, 9-inch diameter by ¾ inch deep | 2.64 |
| 1 washbowl, 12-inch diameter | .35 |
| 1 dishpan, 14-quart, 16½-inch diameter by 5 inches deep | 1.25 |
| 1 ladle with hooked handle, 8¾ inches long | .25 |
| 1 colander, 3-quart size, top measure, 10¾ inches | .65 |
| 1 coffee pot, 4-quart, enamel cover | .90 |

### TINWARE.

| | |
|---|---|
| 1 strainer, 4-inch, with rest and wooden handle | .10 |
| 1 fine strainer, 6-inch diameter | .25 |

### TINWARE—continued.

| | Cost. |
|---|---|
| 1 coarse strainer, 6-inch diameter | $0.25 |
| 1 extension strainer | .10 |
| 1 soap shaker, large | .15 |
| 7 cake coolers, 10 by 14 inches | 1.05 |
| 1 dish drainer, heavy wire | .25 |
| 2 potato ricers | .50 |
| 1 large funnel, 7-inch | .35 |
| 1 small funnel, 4½-inch | .20 |
| 1 flour sifter | .25 |
| 6 bread tins, No. 1 sponge | 1.20 |
| 2 cake pans, No. 2, square biscuit | .60 |
| 2 cake pans, No. 1, square biscuit | .50 |
| 1 grater, No. 2 | .10 |
| 1 grater, No. 2 (different make) | .10 |
| 1 colander, 12-inch | .60 |
| 1 cake turner, square | .10 |
| 1 quart measure, graduated | .20 |
| 1 corer | .10 |
| 12 biscuit cutters, 4 each of sizes Nos. 1, 2, and 3 | 1.20 |
| 1 skimmer, flat | .10 |
| 1 skimmer ladle | .10 |
| 1 wire dishcloth | .10 |
| 1 milk-bottle opener | .05 |
| 1 nutmeg grater | .10 |
| 1 angel cake tin, tube, removable bottom | .20 |
| 2 sets muffin tins, 12 in a set | 1.00 |
| 1 bread raiser, No. 110 | .85 |
| 1 clothes boiler, seamless cover | 2.50 |

### MISCELLANEOUS.

| | |
|---|---|
| 1 garbage pail, with cover, galvanized iron | .78 |
| 1 rubbish can, galvanized iron | 2.00 |
| 1 scrub pail, heavy, 12-quart, galvanized iron | .50 |
| 1 twine mop, 16-ounce, medium | .35 |
| 1 broom | .50 |
| 1 can opener, with corkscrew | .10 |
| 3 egg beaters, No. 1 | 1.50 |
| 2 egg beaters (different make) | .30 |
| 1 cream whip, 1-quart | .50 |
| 1 set spice boxes, white enamel, 5 in a set | .45 |
| 1 food chopper | 1.00 |
| 1 ice-cream disher, 10 to quart | 1.50 |
| 4 asbestos mats, round, 10-inch, tin bound | .40 |
| 4 asbestos mats, oval, 12-inch, tin bound | .60 |
| 1 knife sharpener | 1.25 |
| 1 clothes basket, oval, willow, medium size | 1.50 |
| 1 wringer and bench | 6.50 |
| 1 mop wringer on pail | 2.50 |
| 1 glass washboard | .50 |
| 1 dustpan | .35 |
| 1 sanitary dustpan | .50 |
| 1 dustpan brush | 1.00 |
| 1 dustpan brush (different size) | .35 |
| Total | 152.01 |

## LISTS OF MATERIAL AND COST OF CONSTRUCTING THREE UNIT KITCHENS, .......... SCHOOL NO. 1.

Figures 1 and 2 show how the third floor of a wooden storage building was converted into unit kitchens. Plate No. 1 is a photograph of one of these kitchens. This portion of the building had never been finished; so in addition to sheathing the walls, it was necessary to install plumbing, electric wiring, and gas connections. The carpentry and wiring were done by the boys' department of the school. Expenditures for stock are given below.

| | |
|---|---|
| 3,637 feet gumwood flooring | $134.94 |
| 273 feet hemlock boards | 6.55 |
| 1,954 feet spruce, 2 by 2 inches | 52.77 |
| 1,200 feet furring | 32.90 |
| 675 feet matched spruce | 20.09 |
| 201 feet North Carolina pine | 11.06 |
| 4,014 feet cypress ⅞ by 2 inches | 40.14 |
| 502 feet ¾-inch molding | 3.26 |
| 335 feet cypress, 7½-inch base | 18.43 |
| 1,004 feet 7.8 by 12-inch cypress | 30.12 |
| 180 pounds 7-penny wire nails | 5.40 |
| 125 pounds 8-penny common nails | 4.41 |
| 25 pounds wire lath nails | 1.50 |
| 55 pounds wire nails | 1.94 |
| 25 pounds 1¼-penny wire nails | 1.50 |
| 11,376 square feet wall board | 225.96 |
| 9 mortise locks | 6.75 |
| 9 pairs jet knobs | 1.80 |
| 9 keyhole escutcheons | $1.08 |
| 9 base knobs | .18 |
| 1 can floor wax | .50 |
| 2 coats paint for walls and oiling floors | 186.00 |
| Plumbing | 132.00 |
| Doors and hinges were taken from another part of the plant. | |
| **ELECTRICAL MATERIAL.** | |
| Stock for wiring | $24.22 |
| Fixtures | 71.50 |
| Panel box | 12.80 |
| Fuses | 4.20 |
| Extra wiring for power circuit | 5.50 |
| Plug receptacles | 9.96 |
| Total | 1,077.45 |

## LISTS OF MATERIAL AND COST OF CONSTRUCTING THREE UNIT KITCHENS, .......... SCHOOL No. 2.

In this brick building a partition was torn out, throwing two rooms into one, and kitchens installed in this space. Figures 3 and 4 give the space both before and after the alterations. Plate 2 *A* shows the finished kitchens and Plate 2 *B* shows one kitchen in detail.

The work was done by contract according to the items given below. As the rooms were already lighted by both electricity and gas there was no additional expense for either fixtures or installation.

| | |
|---|---|
| Carpentry, including lumber and labor | $280.00 |
| Plastering | 124.00 |
| Plumbing, including sinks, prices of which are given under equipment for each kitchen, also copper pipes for gas-stove connections | 210.00 |
| Total | 614.00 |

*Restaurant record and cost sheet (date) .........., 1914.*

| Amount. | Article. | Quantity of material used. | Cost. | Selling price. | Left over. | Disposal. |
|---|---|---|---|---|---|---|
| | | | | | | |

Total ......
Cost of service ......
Cost of ice ......
Cost of fuel ......
Total cost ......
Receipts ......

Signature of clerk.
..................................

Signature of teacher.
..................................

## CARD FOR COOKING RECEIPTS.

Individual receipt card used in teaching cooking.
The back of the card is for "Directions."

### Cooking Receipts.

Name.............................. Date..............................
Article.............................. Quantity..............................
Method of cooking.................. Time..............................

| Material. | Quantity. | Cost. |
|---|---|---|
| | | |

*Helpful books for the kitchen.*

| Books. | Author. | Publisher. | Price. |
|---|---|---|---|
| Boston Cooking-School Cook Book.. | Fanny M. Farmer.... | Little, Brown & Co., New York... | $1.60 |
| A New Book of Cookery............ | .....do.................. | .....do............................ | 1.60 |
| Food and Cookery for the Sick and Convalescent. | .....do.................. | .....do............................ | 1.50 |
| What to Have for Dinner.......... | .....do.................. | .....do............................ | 1.5 |
| Fireless Cook Book................ | M. J. Mitchell......... | Doubleday, Page & Co., New York. | 1.25 |
| International Cook Book........... | A. Filippini............ | .....do............................ | 1.00 |
| Practical Cooking and Serving...... | Janet Hill.............. | .....do............................ | 1.50 |
| The New Housekeeping............ | C. Frederick........... | .....do............................ | 1.00 |
| Like Mother Used to Make......... | C. T. Herrick.......... | Dana, Estes & Co., Boston........ | 1.25 |
| The Cook Book of Leftovers........ | ........................ | Harper & Bros., New York....... | 1.00 |
| Paper Bag Cookery................ | Nicholas Soyer........ | Sturges & Walton, New York..... | 1.00 |
| Home Science Cook Book.......... | Mary J. Lincoln and Anna Barrows. | Whitcomb & Barrow, Boston..... | 1.00 |
| Lessons in Cookery through Preparation of Meals. | ........................ | American School of Home Economics, Chicago. | ....... |
| Library of Home Economics (12 volumes). | ........................ | .....do............................ | 16.20 |
| Pure Foods......................... | John Olsen............ | Ginn & Co........................ | .80 |
| The Lunch Room.................. | Paul Richards......... | The Hotel Monthly, 443 South Dearborn St., Chicago. | 2.00 |
| Food and Dietetics................ | Robert Hutchinson... | William Wood & Co., New York.. | 3.00 |
| The Efficient Kitchen.............. | Georgie B. Child...... | Housekeeping Experiment Station, Stamford, Conn. | 1.25 |

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# MONTHLY RECORD OF CURRENT EDUCATIONAL PUBLICATIONS

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# MONTHLY RECORD OF CURRENT EDUCATIONAL PUBLICATIONS.

**CONTENTS.—Introductory notes—Publications of associations—Educational history and biography—Current educational conditions—Pedagogics and didactics—Educational psychology, Child study—Special methods of instruction—Special subjects of curriculum—Kindergarten and primary school—Rural education—Secondary education—Teachers: Training and professional status—Higher education—School administration—School management—School hygiene and sanitation—Sex hygiene—Physical training—Play and playgrounds—Social aspects of education—Moral education—Religious education—Manual and vocational training—Vocational guidance—Agriculture, home gardening—Home economics—Professional education—Civic education—Education of women—Orientals—Defective and delinquent children—Education extension—Libraries and museums—Bureau of Education: Recent publications—Bulletin of the Bureau of Education.**

## INTRODUCTORY NOTES.

Some noteworthy recent books are the following, the numbers in parentheses referring to the numbers of the full entries in this bulletin: Welton, What do we mean by education? (1909); Jacoby, Child training as an exact science (1912); Thorndike, Educational psychology, briefer course (1919); Winch, Children's perception (1923); Fairchild, Teaching of poetry in the high school (1938); Fisher, Mothers and children (1968); Stout, The high school (1981); Bagley, School discipline (2009); Crafts, Bible in schools—plans of many lands (2036); Davis, Vocational and moral guidance (2054); Hill, Teaching of civics (2066); Binet and Simon, Mentally deficient children, authorized translation (2077).

Only publications of the Bureau of Education are available for free distribution by this office. All others here listed may ordinarily be obtained from their respective publishers, either directly or through a dealer, or, in the case of an association publication, from the secretary of the issuing organization.

Books, pamphlets, etc., intended for inclusion in this record should be sent to the library of the Bureau of Education, Washington, D. C.

## PUBLICATIONS OF ASSOCIATIONS.

1886. **Arkansas teachers' association.** Minutes of the sixteenth annual session . . . held at Little Rock, Ark., December 28–31, 1913. 38 p. 8°. (Lila M. Barnette, secretary, Little Rock, Ark.)

**Contains: 1. A. R. Reeves: The basis of ethical training, p. 28–31. 2. L. M. Favrot: The school—a vital factor in a people's progress, p. 31–35. 3. A. B. Crump: Agricultural extension work, p. 35–38.**

1887. **National association of school accounting officers.** Report of the meeting . . . May 19–21, 1914, Memphis, Tenn. 62 p. 8°. (William Dick, secretary-treasurer, Board of public education, Philadelphia, Pa.)

Contains: 1. August Hiller: School accounting and costs, p. 7–17. 2. H. R. M. Cook: Some school affairs, p. 19–32. 3. William Dick: Concentration of business functions in public school administration, p. 32–35. 4. W. T. Keough: Overhead costs, p. 36–40. 5. G. W. Gerwig: Standard units of school measurement, p. 40–45. 6. C. P. Mason: Preparation of the budget, p. 45–58.

1888. **New York state association of district superintendents.** Proceedings of the first and second annual meeting . . . for the years 1912–1913, and 1913–1914. 279 p. 8°. (Gertrude E. Hyde, secretary, Moira, N. Y.)

Contains: 1. T. E Finegan: Important features of rural education, p. 5–20. 2. G. H. Covey: Cooperative agencies in the work of district superintendents, p. 21–28; Discussion, p. 29–32. 3. Sherman Williams: Reading circles for teachers and pupils, p. 32–37. 4. A. J. Fields: Play as an educational factor, p. 64–67; Discussion, p. 67–68. 5. C. W. Wheelock: Relation of district superintendents to high schools, p. 71–76; Discussion, p. 76–78. 6. T. E. Finegan: The immediate needs for our rural schools, p. 104–20. 7. W. E Pierce: Powers and duties of the district superintendent, p. 122–30; Discussion, p. 130–34. 8. W. H. Maxwell: [Duties of the superintendent] p. 135–37. 9. P. P. Claxton: Certain phases of the reorganization of country and village schools, p. 137–44. 10. M. T. Scudder: The Montessori system, p. 144–48. 11. J. H. MacCracken: Politics and the schools, p. 148–58. 12. W. F. Johnson: Relation between the rural public school and the metropolitan university, p. 174–90. 13. M. A. Bigelow: Sex education, p. 190–200. 14. H. H. Horner: Shall the present system of grade examinations in New York state be continued, p. 213–37; Discussion, p. 237–42. 15. Ruth M. Johnston: Shall grade examinations be abolished, p. 242–46; Discussions, p. 246–50. 16. Sherman Williams: What should be accomplished through the use of the school library, p. 253–62.

1889. **South Dakota educational association.** Proceedings of the thirty-first annual session . . . held at Sioux Falls, November 24–26, 1913. 408 p. 8°. (J. C. Lindsey, secretary, Mitchell, S. Dak.)

Contains: 1. E. C. Perisho: The rural school and the state, p. 40–50. 2. C. G. Lawrence: Dominant educational needs in South Dakota, p. 51–60. 3. A. A. McDonald: How the high schools can aid the rural schools, p. 68–77. 4. F. L. Cook: The state normal school and rural teaching, p. 81–85. 5. J. W. Browning: The schools and the critics, p. 91–101. 6. H. P. Patterson: Ideals in present day education, p. 102–10. 7. O. O. Young: Standardization of South Dakota high schools, p. 111–16. 8. G. M. Smith: The pensioning of South Dakota teachers, p. 127–34. 9. G. G. Wenzlaff: The preparation of teachers for rural schools, p. 141–46. 10. Dilla E. Wimple: Rural school graduation—how successfully accomplished, p. 147–50. 11. C. G. St. John: The advantages of consolidated schools, p. 155–62. 12. C. K. Overhulse: The teacher as community leader, p. 163–68. 13. Kathryn M. French: Adolescent Tom and Mary, p. 169–76. 14. J. W. Heaton: Education and life, p. 181–85. 15. Dilla E. Wimple: Teaching classics in the lower grades, p. 186–91. 16. C. H. Lugg: The school's relation to efficiency, p. 200–7. 17. Margaret D. Kirby: Education of our girls for home-making, p. 208–14. 18. Maude Fox: The value of play, p. 226–31. 19. A. N. Hume: The spirit of agriculture in education, p. 263–74. 20. J. G. Parsons: The economic value of health supervision of schools, p. 275–79. 21. Alexander Strachan: Physical education and efficiency, p. 280–84. 22. C. R. Goff: Securing and retaining the real teacher, p. 285–92. 23. J. W. McClinton: The school board membership, p. 293–99. 24. Emily Chapman: How can we make the teaching of English practical, p. 313–23. 25. W. F. Jones: The vitality of teaching, p. 338–46; Discussion by E. C. Woodburn, p. 347–50.

## EDUCATIONAL HISTORY AND BIOGRAPHY.

1890. **Kitchin, W. P. H.** Recollections of Louvain university. Catholic world, 100: 378–85, December 1914.

Interesting account of the work at Louvain, which combined "the systems of both English and continental universities."

## CURRENT EDUCATIONAL CONDITIONS.

1891. **Bardeen, Charles W.** The truth about school surveys. School bulletin, 41: 55–57, November 1914.

Address before the Council of city superintendents, October 22, 1914.

The author says that the requisites of a school survey are, first, competent persons to conduct it; second, the persons conducting it must have a right purpose; third, they must have sufficient time; fourth, they must have the perspective; and fifth, they must grasp the local situation.

1892. **Doumic, René.** Le retour à la culture française. Revue des deux mondes, 24, 317–28, November 15, 1914.

Demands a return to the classical culture of France: "Deliver us from the pedantic, mediocre, and amorphous education *à l'allemande!* Give us back education in clarity, nobility, and beauty, *à la française.*"

1893. The nation's adventures in education. Unpopular review, 3: 149–58, January-March 1915.

Writer mentions the need of preserving a due sense of proportion in the educational ventures undertaken by the federal government. He asks: "Which shall the nation attend to first, special education or elementary education; generosity to immigrants or justice to native-born; to accelerate her industries or to insure civilization throughout her borders?"

1894. **Parkinson, W. D.** Literacy and the immigrant. Journal of education, 80: 567–70, December 10, 1914.

1895. **Stout, John Elbert.** Tests of educational achievement. Midland schools, 29: 103–8, December 1914.

Address delivered before the Iowa state teachers' association, November 5, 1914.

1896. **Tavernier, Eugene.** Independent teaching in France during the last ten years. Constructive quarterly, 2: 850–67, December 1914.

Independence in the meaning of the writer is "teaching independent of the State." Describes the struggles of French Catholics to instruct their teachers, etc., apart from lay schools.

1897. **Whittaker, H. W.** The inadequacy of our present system of public schools. Teacher's journal, 14: 247–52, December 1914.

Discusses the subject under the following headings: The need of industrial and vocational education for the masses, Importance and purpose of our public schools, The school for the plain man, Trade education for women, Vocational education and organized labor, and Trade education and socialism.

## PEDAGOGICS AND DIDACTICS.

1898. **Bardeen, Charles W.** The girl from Girton, and other stories about schools. Syracuse, N. Y., C. W. Bardeen, 1914. 235, xxxii p. 12°.

1899. **Bolton, Frederick E.** Some standards of success in teaching. Journal of education, 80: 507–8, November 26, 1914.

The writer says that a successful teacher is enthusiastic about his work and is constantly studying in the attempt to improve the efficiency of his work. Some marks of success in any teacher are the number of pupils who successfully accomplish the given work, the number of pupils who go on to a higher grade, the respect of the pupils for the teacher, and the refining influence of the teacher upon pupils and community.

1900. **Burnham, William H.,** *ed.* Bibliographies on educational subjects. Worcester, Mass., Clark university press [1914] 45 p. 8°. (Clark university library. Publications, vol. 4, no. 3, December 1914)

1901. **Findlay, J. J.** Educational science in Australia—and elsewhere. Educational times (London) 67: 539–42, December 1, 1914.

1902. **Hayes, Edward C.** Education for personality. Educational review, 48: 475–86, December 1914.

Sociology furnishes valuable guidance to education. Says that "nature does not give us conscience but only the capacity to acquire one, social evolution and education must do the rest."

1903. **Hodgson, Elizabeth.** The motivation of school work. American education, 18: 140–43, November 1914.

1904. **Klapper, Paul.** Efficiency in class instruction. Educational review, 48: 498–13, December 1914.

Defines efficiency as "that state in which we approximate preconceived ends or values through an economical expenditure of time and energy." Examinations and tests must be reorganized so that they become "a truer index of the character of class work," etc. Suggests methods.

1905. **Morton, W. H.** The socialized recitation. Nebraska teacher, 17: 204–5, December 1914.

Describes a new type of recitation rapidly spreading over Nebraska.

1906. **Oehme, Walter.** Strömungen der modernen pädagogik. Neue bahnen, 25: 533–52, October 1914.

A penetrating and comprehensive analysis of contemporary pedagogical tendencies as the reflection of conscious efforts made to attain the goal set by the development of the whole of social life. "Education has its roots in culture (kultur); it possesses no movement of its own; its movement is the movement of culture."

1907. **Oliphant, James.** Education and sex aptitudes. School world (London) 16: 441–44, December 1914.

Writer says we must be careful "not to exaggerate sex differences by giving too much heed to them." The best attitude to take relative to sex aptitudes up to the age of 14 is to ignore them altogether.

1908. **Sanders, Frederic W.** The organization of education. Education, 35: 231–36, December 1914.

Discusses the high school; curriculum of secondary education, etc. Says: "In a rich and populous community, it should be perfectly feasible for a student to pursue the so-called cultural and vocational studies side by side for an indefinite number of years." Continued from November number.

1909. **Welton James.** What do we mean by education? London, Macmillan and co., limited, 1914. xii, 257 p. 8°.

CONTENTS.—1. The end rules the means.—2. What should be the end?—3. Synthesis of liberty and authority.—4. What are the means?—5. Who are the agents?

The author is profoundly convinced that theory of education can not be separated without disaster from theory of life.

## EDUCATIONAL PSYCHOLOGY, CHILD STUDY.

1910. **Adler, Alfred.** Soziale einflüsse in der kinderstube. Pädagogisches archiv, 56: 473–87, heft 9, 1914.

A discussion, by a nerve specialist of Vienna, of the social influences in the child's home environment which unconsciously mould character and reaction to the problems of school and life. The analysis shows strong traces of the psychological theories of Sigmund Freud and his school.

1911. **Ballou, Frank W.** Educational standards and educational measurement, with particular reference to standards in the four fundamentals in arithmetic. Boston, Printing department, 1914. 21 p. 8°. (School document no. 10—1914, Boston public schools. Bulletin no. 3 of the Department of educational investigation and measurement)

1912. **Jacoby, George W.** Child training as an exact science. A treatise based upon the principles of modern psychology, normal and abnormal. New York and London, Funk & Wagnalls company, 1914. xv, 384 p. illus. 12°.

1913. **Kayfetz, Isidore.** A critical study of the Hillegas composition scale. Pedagogical seminary, 21: 559–77, December 1914.

Also separately reprinted.

Bibliography: p. 576–77.

1914. **Kuhlmann, F.** Some results of examining a thousand public school children with a revision of the Binet-Simon tests of intelligence by untrained examiners. Journal of psycho-asthenics, 18: 150–79, 233–69, March, June 1914.

1915. **Monroe, Walter S.** Standard tests and their uses. Teaching, 1: 9–14, November 1914.

The writer says that "at present the instruments available for measuring our educational products are crude and are applicable to only a few elements of the total product, but such as we have may be used advantageously by teachers and supervising officials."

1916. **Murray, E. R.** Froebel as a pioneer in modern psychology. London, George Philip & son, ltd., 1914. 230 p. 12°.

1917. **Peterson, Harvey A.** The generalizing ability of children. Journal of educational psychology, 5: 561-70, December 1914.

"Generalization on the basis of resemblances is one of the most important aspects of reasoning. The author reports the results of an experimental study of the ability of children from 10 to 14 years of age to generalize on four different kinds of situation. If the average rate of improvement be taken as an index, the generalizing ability doubles during the years in question."

1918. **Terman, Lewis M.** Precocious children. Forum, 52: 893-98, December 1914.

Says that children who exhibit precocious tendencies should be subjected to psychological and medical study. Opportunities for physical development are the best safeguards against the danger of precocity.

1919. **Thorndyke, Edward L.** Educational psychology; briefer course. New York, Teachers college, Columbia university, 1914. 442 p. 8°.

A simpler treatment of the more fundamental subject matter of the author's large three-volume work.

1920. ——— The foundations of educational achievement. Educational review, 43: 487-97, December 1914.

Contributions to education from recent studies in psychology.

1921. ——— Measurements of ability to solve arithmetical problems. Pedagogical seminary, 21: 495-503, December 1914.

Certain measurements which the cooperation of many principals and teachers in Massachusetts enabled the author to make "give results which seem worth reporting concerning three topics: Educational scales, Sex-differences, and Retardation."

1922. What shall we do with left-handed pupils? A symposium conducted by Walter G. McMullin. Teacher, 18: 331-38, December 1914.

1923. **Winch, W. H.** Children's perceptions; an experimental study of observation and report in school children. Baltimore, Warwick & York, inc., 1914. x, 245 p. front. 12°. (Educational psychology monographs, ed. by G. M. Whipple, no. 12)

1924. **Witham, Ernest C.** School measurement. Journal of educational psychology, 5: 571-88, December 1914.

"The author examines a number of the recent school surveys, and shows that nowhere do we find a scheme of school measurement that is generally applicable and that furnishes comparable data. He then presents a scheme for such measurement, and gives sample graphs showing the results of its application to different schools."

1925. **Yerkes, Robert M.** The point scale: a new method for measuring mental capacity. Boston medical and surgical journal, 171: 857-66, December 3, 1914.

A scale of mental measurements developed at the Boston psychopathic hospital, designed "to take the place of the Binet measuring scale of intelligence and to furnish a more definite and accurate index of the mental capacity of individuals than can be obtained by the employment of the Binet method."

Read in abstract at the Second annual conference on the medical and social work of the Psychopathic hospital, June 26, 1914.

## SPECIAL METHODS OF INSTRUCTION.

1926. **Ferguson, Ida May.** Children and the movies. Minnestota public library commission library notes and news, 4: 139-42, December 1914.

Paper read before the Minnesota federation of women's clubs, Rochester, Minn.

1927. **Hurlbert, Dorothy.** Moving pictures. Minnesota public library commission library notes and news, 4: 132-39, December 1914.

Names some firms renting machines and films for educational purposes.

1928. **Lanier, Henry W.** The educational future of the moving picture. American review of reviews, 50: 725-29, December 1914.

Suggest the need of a special endowment for the study of the educational advantages of moving pictures; to start "a real school library of films," etc.

## SPECIAL SUBJECTS OF CURRICULUM.

1929. **Albright, Charles E.** The teaching of laboratory physics in high schools. Ohio teacher, 35: 148–50, November 1914.

1930. **Barth, Paul.** Die seele des geschichtlichen unterrichts. Neue bahnen, 26: 2–16, October 1914.

The chief interest of historical instruction is the *moral progress* revealing itself in the state as the bearer of this progress. This concept of moral progress in history is not too abstract for the comprehension of secondary school pupils.

1931. **Beesley, Thomas Quinn.** Why not the laboratory method in the study of literature? Catholic educational review, 8: 385–94, December 1914.

1932. **Caldwell, Otis W.** The nature-study course of the elementary school. Nature-study review, 10: 358–67, December 1914.

This outline, given by grades, is the result of several years of experiment, during which many changes have been made in the content of the course, the methods of work, etc.

1933. **Churchill, J. A.** Nature-study. Nature-study review, 10: 368–74, December 1914.

From the course of study of the elementary schools of Oregon.

1934. **Dann, Hollis.** Music in the normal school. School music, 15: 23–28, November–December 1914.

1935. **Dearborn, George Van Ness.** What a student of elementary psychology should be taught concerning the functions of the nervous system. Sonderabdruck aus Journal für psychologie und neurologie, bd. 21, 1914. Leipzig, J. A. Barth, 1914. p. 35–44. 4°.

From the program of the 21st annual meeting of the American psychological association.

1936. **Dykema, Peter W.** Good music: how shall we know it? Kindergarten review, 25: 193–96, December 1914.

Gives some suggestions by which the ordinary teacher can be aided to form fairly adequate criticisms of song material. The author says that teachers are told to teach only good music to children, but are left to their own devices in determining the standards of selection.

1937. **Earle, Samuel C.** Examinations in English. English journal, 3: 612–19, December 1914.

1938. **Fairchild, Arthur H. R.** The teaching of poetry in the high school. Boston, New York [etc.] Houghton Mifflin company [1914] xii, 184 p. front. 12°. (Riverside educational monographs, ed. by H. Suzzallo)

1939. **Fairclough, H. Rushton.** The practical bearing of high-school Latin. Classical journal, 10: 126–37, December 1914.

A paper read before the California high-school teachers' association at Berkeley, California, July 1, 1914.

Shows that Latin is "extremely practical, and worthy of being accorded an honorable and prominent position in the school curriculum."

1940. **Fikenscher, F.** Die jahrzahl, der götze des geschichtsunterrichts; ein beitrag zur geschichts-methodischen frage: Wie soll der geschichtsunterricht die zeitvorstellungen begründen und klären? Pädagogische warte, 21: 1058–67, October 1, 1914.

Suggests and outlines methods of presenting a synoptic picture of a period which pupils can grasp as a whole of experience as superior to memorizing of dates and chronological outlines. Contains also suggestions for graphic representation of chronological data and relations.

1941. **Flower, William Polk,** *jr.* The necessity of Spanish in our Latin American trade expansion. Educational bi-monthly, 9: 125–30, December 1914.

1942. **Foraker, F. A.** The relation of the symbols of mathematics to the elements of the problems. Education, 35: 237–40, December 1914.

Says that the student should be made as expert in analyzing "the conditions surrounding the elements of a problem as in handling the symbols in which they may be expressed in equational form."

1943. **Guysi, Alice Viola.** A workable program and better results in object drawing. School-arts magazine, 14: 241–45, December 1914.

The author says: "The lack of definite aims graded to suit the pupil is, I believe the cause of most failures in teaching still life."

1944. **Holzworth, Charles.** In defense of our modern language instruction. Education, 35: 211–19, December 1914.

Discusses the subject under four heads: 1. The nature of language itself; 2. Faults of the pupils who are to be taught; 3. The present system and arrangement of courses; 4. Faults which lie in the teachers.

1945. **Hosic, James F.** The separation of literature and composition in the high school course. Educator-journal, 15: 182–84, December 1914.

A synopsis of an address delivered before the Indiana association of English teachers at the annual meeting in October.

1946. **Kingsley, Maud E.** Examination outline for language work. Education, 35: 248–52, December 1914.

Intended for pupils about to enter the high school.

1947. **Kloss, Erich.** Zur methodik des hygieneunterrichts in den fortbildungsschulen. Zeitschrift für schulgesundheitspflege, 27: 609–13, no. 9, September 1914.

The author demands that hygiene, as the science of the care of the body, should furnish the aim of the entire instruction in the natural sciences.

1948. **Lasher, G. S.** Correct spelling—a habit. Teaching, 1: 16–20, November 1914.

Gives a list of words misspelled by college and secondary students. The author says that the function of the elementary school in teaching spelling is the formation of correct habits.

1949. **McCarthy, Charles H.** History and other high school branches. Catholic educational review, 8: 398–412, December 1914.

1950. **McConathy, Osborne.** Efficiency in music teaching. School music, 15: 18–23, November–December 1914.

A condensed report of a talk given at the Iowa state teachers' association, November 5, 1914.

1951. **Mais, S. P. B.** The teaching of English prose. Educational times (London) 67: 529–31, December 1, 1914.

Experiences of an English teacher. Describes the interesting experiments of Caldwell Cook, who advocates an imitation of the best models of English literature.

1952. **Miller, George J.** High school and college duplication in science: educational efficiency. School science and mathematics, 14: 749–53, December 1914.

Gives a working plan for the coordination of high school and elementary college sciences.

1953. **Millspaugh, Arthur C.** Notes on history teaching. School review, 22: 678–85, December 1914.

History, in the opinion of the writer, is taught most successfully, "not by cut-and-dried formulas, but by intercourse which is natural, varied, vivid, and allusive."

1954. **Morehouse, Frances M.** Some criticisms of the usual form of history recitations. School and home education, 34: 142–48, December 1914.

Read at the High school conference, University of Illinois, November 20, 1914.

1955. **Murdock, Mabel E.** The teaching of composition in high schools. Pennsylvania school journal, 63: 201–4, November 1914.

1956. **New Jersey. Department of public instruction.** The teaching of reading, July 1914. Union Hill, N. J., Dispatch printing company, 1914. 96 p. 8°.

"This monograph, prepared chiefly by Mr. George A. Mirick, assistant commissioner of education in charge of elementary schools, sets forth some of the principles which it is believed underlie the teaching of reading."

1957. **Poske, Friedrich.** Physik und philosophie. Zeitschrift für den physikalischen und chemischen unterricht, 27: 302–4, heft 5, 1914.

How can instruction in physics be made to induct the pupil into philosophical thinking? Suggests didactic methods, and points out the limitations of the viewpoint of physical science.

1958. **Roecker, W. F.** An elementary course in general science: content and method. School science and mathematics, 14: 755–69, December 1914.

Discussed under the following headings: The history of general science, The demand for elementary general science, Present status of elementary science in Wisconsin, The purpose of a general science course, The organization of the course, Content of the course, Typical exercises, and Method.

1959. **Russell, William F.** The entrance of history into the curriculum of the secondary school. History teacher's magazine, 5: 311–18, December 1914.

1960. **Schively, Adeline F.** The nature-study course of the school of observation and practice. Nature-study review, 10: 337–58, December 1914.

1961. **Schoch, Eugene Paul.** Chemistry in the high school. Austin, Tex., The University, 1914. 3 v. in 2. illus. 8°. (Bulletin of the University of Texas, nos. 329, 375; official series nos. 100, 110)

CONTENTS.—pt. I. Equipment.—pt. II. A course of lessons and exercises in general chemistry.—pt. III. Teacher's manual for a course of lessons and exercises in general chemistry.

1962. **Simmons, A. T.** Science in the school curriculum. School world (London) 16: 458–61, December, 1914.

1963. **Trever, A. A.** The other side. Classical journal, 10: 106–14, December 1914.

"In the November number of the Forum an article appeared entitled, 'Wastes and abuses of our educational system.' The argument was directed against classical studies and pure mathematics, as important collegiate subjects. The superficial and off-hand manner in which the classics were bowed out of the halls of learning has prompted this answer."

1964. **Tuell, Annie K.** Our classical recollections. Atlantic monthly, 114: 778–86, December 1914.

An appreciation of classical scholarship. Says that in America there is needed "some modest revival of Greek learning."

1965. **Weichardt, E.** Gedanken über eine künftige reform unserer gymnasien und realgymnasien. Preussiche jahrbücher, 158: 265–76, November 1914.

Advocates postponement of Greek to obersekunda.

1966. **Weill, Louis.** Les langues étrangères et l'enseignement supérieur. Revue internationale de l'enseignement, 34: 102–04, August 1914.

At the French universities, the courses in modern languages are designed for graduates specializing in modern philology. The author urges the establishment of courses designed for and meeting the needs of students preparing for the professions.

1967. **Wilber, Horace Z.** Problems in English teaching. American schoolmaster, 7: 398–409, November 1914.

Address delivered before the Washington educational association, Tacoma, October 30, 1914.

## KINDERGARTEN AND PRIMARY SCHOOL.

1968. **Fisher, Dorothy Canfield.** Mothers and children. New York, H. Holt and company, 1914. xii, 285 p. 12°.

1969. **Helms, Nik. M.** Nogle bemaerkninger om Montessorimetoden. Vor ungdom, September 1914, p. 323–27.

Concludes that Madame Montessori has made a real contribution to both the theory and practice of child training.

## RURAL EDUCATION.

1970. **Burton, A. C.** America's greatest educational problem. Arkansas teacher, 2: 1–3, December 1914.

Deals with the rural school.

1971. **Duggan, M. L.** Educational survey of Rabun County, Georgia . . . under the direction of the Department of education. [Atlanta] 1914. 48 p. illus. 8°.

No. 1 in a series of educational surveys of the counties of Georgia.

1972. Rural educator, vol. 4, no. 5, December 1914. (The rural school as a community center)

Contains: 1. C. J. Galpin: The rural social center, a device for large scale constructive rural acquaintance.—2. J. C. Muerman: The rural school as a community center. The community center plan in the state of Washington.—3. Edna O. Clark: The country school as a social center.—4. The school and "Back to the land."—5. Luseo Gunter: The rural school as a social center.

1973. **Sargent, C. G.** The rural and village schools of Colorado. An eight-year survey of each school district, 1906–1913 inclusive. Fort Collins, Colo., Colorado agricultural college, 1914. 106 p. illus. 8°. (Colorado agricultural college. Series xiv, no. 5)

## SECONDARY EDUCATION.

1974. **Alington, Cyril A.** A schoolmaster's apology. London, New York [etc.] Longmans, Green and co., 1914. 207 p. 8°.

An attempt to meet some of the commoner criticisms advanced against the public schools and the Church of England. It deals with the various subjects taught at English public schools and the methods of teaching them.

1975. **Beard, Frederica.** Ethical standards in the high school. Educational review, 43: 444–51, December 1914.

Replies to a questionnaire sent to "a score of reliable students belonging to schools in cities or towns scattered throughout the country from New England to the Mississippi." Questions involved student self-government, standards of honesty, etc.

1976. **Cook, William A.** A general survey of public high-school education in Colorado. Boulder, Colo., University of Colorado, 1914. 92 p. 8°. (University of Colorado bulletin, vol. xiv, no. 10. General series, no. 75. Education series, no. 3)

1977. **Hamilton, F. R.** Why not high school students that work? Education, 35: 241–47, December 1914.

Thinks that a combination of high school instruction and actual work could be established. Such a scheme will tend "to vitalize and unify the educational forces." The student will comprehend the connection between real work and study. "It will be the means of saving a large percentage of the students who now leave the schools because of lack of interest, or on account of economic pressure."

1978. **Josselyn, Homer Walker.** Survey of accredited high schools and professional directory. Topeka, Kansas state printing office, 1914. 252 p. 12°. (University of Kansas. Bulletin, vol. 15, no. 16)

Contains 35 charts showing the preparation, tenure, duties, etc., of teachers in Kansas high schools.

1979. **Judd, Charles H.** Formalism in defining high school units. School review, 22: 649–65, December 1914.

Sees danger in the effort to standardize high schools. Apt to result in "a formal evaluation of school work which in the long run will utterly defeat the purposes for which the principle of standardization was evolved." Says the high schools should define the value of their units; both high schools and colleges should study the problem of the value of work done.

1980. **Rickard, G. E.** High school students' descriptions of their methods of study. School review, 22: 673–77, December 1914.

An experiment made in Oakland city, Indiana.

1981. **Stout, John Elbert.** The high school; its function, organization, and administration; with introduction by L. D. Coffman. Boston, New York [etc.] D. C. Heath & co. [1914] xxiii, 322 p. 12°.

1982. **Walker, N. W.** Developing high schools to meet modern demands. North Carolina high school bulletin, 5: 135–46, October 1914.

The rural high school situation in North Carolina.

## TEACHERS: TRAINING AND PROFESSIONAL STATUS.

1983. **Balliet, Thomas M.** Liberty in teaching. American teacher, 3: 146–48, December 1914.

Address before the Teachers' league of New York city, October 23, 1914.

1984. **Blue, Leonard A.** New York state college for teachers. American education, 18: 143–49, November 1914.

A historical and descriptive sketch of the institution first known as the Albany normal school, then as the New York state normal college, and in 1914 christened by the Regents the New York state college for teachers.

1985. **Bolton, Frederick E.** Professional growth during service. American schoolmaster, 7: 413–15, November 1914.

Gives some suggestions for the improvement of teachers in service.

1986. ——— Some suggestions for the adjustment of teachers' salaries. American school board journal, 49: 10, 71, December 1914.

1987. **Cantwell, J. W.** The education of teachers. Texas school journal, 32: 15–16, December 1914.

Advocates higher requirements for teachers. Says "there would be fwer quitters if there weree better preparation, and consequently there would be greater success and satisfaction in the work."

1988. **Cook, John W.** The organization and function of a practice school. American schoolmaster, 7: 385–97, November 1914.

Address delivered before the Department of normal school of the National education association at St. Paul, Minn., July 8, 1914.

1989. **Engleman, J. O.** A survey of entrance requirements and recent tendencies in the courses of study of the normal schools of the United States. Pedagogical seminary, 21: 532–58, December 1914.

Bibliography: p. 557–58.

This study "is based upon data gathered, for the most part, from the catalogues of last year sent out by 118 state normal schools representing 44 different states."

1990. **Harlan, Charles L.** Why 239 Indiana class A teachers entered the teaching profession, and why 49 per cent of them expect to leave it. Educator-journal, 15: 160–65, December 1914.

Gives tables summarizing replies from a questionnaire. The tables show that the most important inducements which lead persons to enter the teaching profession are salary, a liking for the work, parents' desire, and desire for experience. The most important reasons for giving up teaching are desire to try some other kind of work, poor pay and dislike for teaching.

1991. **McConaughy, James L.** Education courses in New England colleges. School review, 22: 686–91, December 1914.

Says that the historical approach to education is of "interest and significance to the future teacher, but from such a course he will learn little that will be of direct professional value to him when he is facing a noisy high school class for the first time."

1992. **Palmer, George Herbert.** What is a profession? Journal of education, 80: 537–39, December 3, 1914.

Selected from an address delivered in Albany, October 22, before the University convocation, and published in full in University of the state of New York, Bulletin to the schools, no. 3, November 2, 1914, p. 2.

Deals specially with the profession of teaching.

## HIGHER EDUCATION.

1993. **Alexander, James W.** A history of the University club of New York, 1865–1915. New York, Printed for the University club by Charles Scribner's sons, 1915. xviii, 510 p. illus. 8°.

1994. **Brandon, Edgar E.** The internado at the University of La Plata. Educational review, 43: 514–19, December 1914.

In 1910 the University of La Plata, Argentina, abandoned the conventional mess hall and dormitory system of the Latin-American boarding school, and housed its students in homes, presided over by married instructors, very much like conditions at Eton, England. Great success has marked the experiment.

1995. **Cooper, Clayton Sedgwick.** World-wide education. IV. Rhodes scholars and their responsibility. Educational foundations, 26: 199-208, December 1914.

The three preceding articles in the series were mentioned as items 1320, 1575, and 1688 of this record.

1996. **Guérard, Albert-Léon.** Une université en formation. L'Institut Rice de Houston (États-Unis). Revue internationale de l'enseignement, 34: 195-99, September-October 1914.

1997. **Hawes, James A.** The collegiate side shows. Educational review, 43: 433-43, December 1914.

Criticises the undue prominence of college athletics, musical, and dramatic clubs, fraternities, etc. Says there must be some "definite policy adopted by the college authorities in regard to the scheme of education for their undergraduates with less shifting of courses and constant change of attitude toward these questions."

1998. **Masseck, Clinton J.** Some aspects of freshman knowledge. Forum, 52: 899-902, December 1914.

Contrasts methods of instruction in American and Continental colleges and universities. Says that the American student is *given* knowledge: the Continental is "trained to *seek* knowledge for himself."

## SCHOOL ADMINISTRATION.

1999. **Association of district superintendents,** *New York.* New York school inquiry. Reply of the Association of district superintendents of New York to certain findings and recommendations of Professor Frank M. McMurry and Professor Edward C. Elliott; prepared by a committee, ed. by Joseph S. Taylor, Pd. D. New York [For sale by J. S. Taylor] 1914. 116 p. 8°.

"The final conclusion of this review is that the whole inquiry with reference to the teaching and supervision of elementary schools is a set of opinions backed by guesses and assumptions."

2000. **Chancellor, William E.** How to become a good school board member. American school board journal, 49: 11-13, 70-71, December 1914.

The author says that a good board member must not think that he knows all about American schools, but should try to seek at first hand all the information about his own schools, visiting them quietly and observing for himself. He should also be regular and punctual in his attendance upon board and committee meetings, and concentrate upon the business in question while at the meetings. Dr. Chancellor also gives some suggestions as to how the good board member can help the school superintendent.

2001. **Doughty, W. F.** The county superintendent proposition. Texas school journal, 32: 11-12, 32-35, December 1914.

Advocates the selection of the county superintendent of public instruction by the county board of education instead of by the people. Discusses particularly the conditions in Texas.

2002. **Fuller, A. C.,** *jr.* Time distribution in grade school subjects. Midland schools, 29: 114-17, December 1914.

Gives a table to help superintendents who wish to know what is the right amount of time to devote to the various subjects, and what other school men are providing for their systems.

2003. **Missouri state teachers' association.** The county school unit. [Columbia, Mo.? 1914] 27 p. 8°.

Contains extracts from the report of the Committee on a larger school unit, appointed by the Missouri state teachers' association.

2004. **Rankin, A. W.** Democracy in school administration. Elementary teacher, 4: 1, 3, December 1914.

2005. **Thornburgh, W. B.** Is your course adjusted to the capacity of your pupils. School education, 34: 5, December 1914.

'A survey of the schools of Owatonna, Minn. The general summary shows that 70.4% of the children were normal, 14.4% accelerated, and 15.2% retarded, indicating that the courses of study are finely adjusted to the capabilities of the masses—and as finely adjusted for the swift and the slow as a course may be, practically the same percentage of accelerated and retarded pupils being reported."—The Editor.

2006. **Wisconsin city superintendents' association.** Report of Committee on the reorganization of the public school system on a six-six plan. Issued by C. P. Cary, state superintendent. Madison, Wis., Democrat printing company, state printer, 1914. 11 p. 8°.

Members of committee: H. L. Miller, Mrs. Mary D. Bradford, F. E. Converse.

## SCHOOL MANAGEMENT.

2007. **Bachman, Frank P.** Variations in study standards. Elementary school journal, 15: 210–18, December 1914.

Gives the tentative conclusion that "within a given school system study-standards vary with the school, the subject, the study-grade, and the teacher." Emphasizes the need of collecting such data.

2008. **Bagley, William Chandler.** Principles justifying common elements in the school program. School and home education, 34: 119–31, December 1914.

Read at the High school conference held at the University of Illinois, November 19, 1914.

The author aims to show, first, that a certain amount of uniformity is essential for a reason more fundamental than economy, second, that the justification of a certain measure of uniformity furnishes one rather definite standard for selecting common elements, and third, that the essential uniformity may be insured without interfering unduly with desirable differentiation.

2009. ——— School discipline. New York, The Macmillan company, 1914. xiv, 259 p. 12°.

Endeavors to present in a concrete way the various steps that may be taken to establish a wholesome school "spirit" that will reduce disciplinary difficulties to a minimum. To this end, most of the chapters deal rather with positive and non-coercive than with restrictive and repressive methods of treatment.

2010. **Drake, E. H.** An interesting experiment. Elementary school journal, 15: 219–22, December 1914.

Describes an experiment made by the grade teachers of the Elkhart (Indiana) public schools during the past year "with what may be called a system of minimum-maximum assignments of lessons. The purpose of the system was to provide a course to meet the different abilities of different children and thus to increase the promotion rate among them."

2011. **Hall-Quest, Alfred L.** Supervised study. Virginia journal of education, 8: 181–84, December 1914.

2012. **Kelly, F. J.** Reliability of teachers' marks. Teaching, 1: 3–9, November 1914.

During the past year the writer has made a series of investigations relative to the variability of teachers' marks. The important facts which the investigations disclosed are given in this article as a means of making clear the extent of variability among teachers' marks.

2013. **Sechrist, Frank K.** Examinations and grading. Education, 35: 197–210, December 1914.

A study undertaken "in the belief that errors could be graded, that if teachers knew the conditions under which they were committed there would be substantial agreement as to their seriousness."

2014. **Wardell, Harriet S.** The work of a "self-activity class." Normal instructor and primary plans, 24: 35–36, 74, December 1914.

"The problem of finding employment for pupils who finish tasks in advance of others of the class is an important one. In the issue of May 1914, Miss Wardell reported a plan called the 'Self activity class' that had been in operation a few months. A partial outline of the work given to this class was appended and an invitation extended by the author to teachers wishing to try out the plan to send for the complete outline. That many teachers availed themselves of the privilege, proving that there was a widespread interest in the subject, is the reason for Miss Wardell's second article which provides a complete outline for one year of work."—Editor.

2015. What poor attendance means. Journal of education, 80: 576–77, December 10, 1914.

Dr. Charles A. Wagner, commissioner of education in Delaware, has issued a pamphlet showing the results of an analytical study of school attendance made by him. The circular contains suggestions for impressing the child with the importance of attendance. These suggestions are quoted in this article.

## SCHOOL HYGIENE AND SANITATION.

2016. **Broughton, Hugh.** The open-air school. New York [etc.] Sir I Pitman & sons, ltd. [1914?] 188 p. illus. 12°.

2017. **Dana, Charles L.** School children not overworked. Teacher's journal, 14: 182–84, November 1914.

Gives portions of a talk by Dr. Charles L. Dana, professor of nervous diseases, Cornell university medical college, on the proposition to shorten school hours.

2018. **Hutt, C. W.** Medical notes for school teachers. London, E. Arnold [1914?] 122 p. 16°.

2019. **International congress on school hygiene.** 4th, Buffalo, August 25–30, 1913. Transactions. Ed. by Thomas A. Storey, with the assistance of Frederic A. Woll and Julian Park. [Buffalo, N. Y., Printed by the Courier co. of Buffalo] 1914. 5 v. illus. 8°. (Thomas A. Storey, secretary general, College of the city of New York)

For contents, see this record for September 1914, item 1100.

2020. Jahrbuch der schulgesundheitspflege; hrsg. von dr. med. Moritz Fürst. Jena, G. Fischer, 1914. 192 p. 12°.

Mit einem beiheft: Schulhygienischer notizkalender.

2021. **Kingsford, Leslie.** School clinics. Parents' review (London) 25: 877–82, December 1914.

Second article of a series. Discusses simplicity in administration and organization. Conditions in England.

2022. **Schulthess, Wilhelm.** Über rückgrats-verkrümmungen, ihre ursachen und ihre behandlung. Monatsblätter für die physische erziehung der jugend, 25: 137–40, September 1914.

Denies the existence of a distinct type of "school scoliosis." The sitting posture in the schoolroom merely gives opportunity for the development of previously existing weaknesses.

## SEX HYGIENE.

2023. **Hall, G. Stanley.** Education and the social hygiene movement. Social hygiene, 1: 29–35, December 1914.

Paper read at the meeting of the American social hygiene association and the Society of sanitary and moral prophylaxis, New York city, October 9, 1914.

2024. **Hall, Winfield Scott.** The relation of education in sex to race betterment. Social hygiene, 1: 67–80, December 1914.

## PHYSICAL TRAINING.

2025. **Clark, Richard McCord.** The department of physical education in preparatory schools and colleges. Physical training, 12: 26–35, November 1914.

Graduating thesis of the Institute and training school of the Young men's Christian association, Chicago.

Continued from a previous number, and to be continued in a later issue.

2026. **Ewerhardt, F. H.** Gymnastics in relation to crippled children. American physical education review, 19: 563–67, November 1914.

Read before the American physical education association, St. Louis, Mo., April 2, 1914.

2027. **Rathmann, G. G.** Physical care and training of children in European schools. American physical education review, 19: 597–609, November 1914.

Read at meeting of the American physical education association, St. Louis, Mo., April 4, 1914.

Tells what has been done for physical training in the schools of Germany, Austria, Switzerland, Belgium, France, England, Sweden, and Denmark.

## PLAY AND PLAYGROUNDS.

2028. **Hanmer, Lee F.** *and* **Perry, Clarence Arthur.** Recreation in Springfield, Illinois; a section of the Springfield survey. New York city, Department of recreation, Russell Sage foundation [1914] 133 p. illus. 8°.

2029. Universal recognition of the value of play. Playground, 8: 314–30, December 1914.

Gives the views of a number of prominent men on the value of play.

## SOCIAL ASPECTS OF EDUCATION.

2030. **Carlton, Frank T.** Social and occupational studies. To what extent do social ideals control occupational studies. Religious education, 9: 592–99, December 1914.

## MORAL EDUCATION.

2031. **Andrews, Fannie Fern.** The war: what should be said about it in the schools? Boston, American school peace league, 1914. 14 p. 8°.

Also in N. E. A. bulletin, 3: 23–28, December 1914.

2032. **Cutten, George Barton.** Moral influence of the curriculum. Religious education, 9: 520–27, December 1914.

Takes up the various studies in the college curriculum, and shows the moral value of each.

2033 **Mayer, Heinrich.** Kinderideale; eine experimentell-pädagogische studie zur religions- und moralpädagogik. Kempten und München, J. Kösel, 1914. viii, 155 p. diagrs. 8°.

2034. **Taylor, Charles K.** Moral education—the history of an experiment. Education, 35: 220–30, December 1914.

Results of an experiment begun, a few years ago, in two of Philadelphia's smaller public schools. Facilities and influences of a school in direct character-making.

## RELIGIOUS EDUCATION.

2035. **Athearn, Walter S.** Teacher training standards. Religious education, 9: 541–57, December 1914.

"At a meeting of the Educational committee of the International Sunday school association held in Chicago in October 1913, Prof. W. S. Athearn was selected as a committee of one to investigate present conditions and present a plan for the revision of the teacher training standards now in operation. The result of this investigation and the proposed revision of standards is presented in this report."

2036. **Crafts, Wilbur F.** Bible in schools plans of many lands. Documents gathered and compiled for Council of church boards of education, 1914. Washington, D. C., Illustrated Bible selections commission, 1914. 192 p. illus. 8°.

Describes the various plans of religious instruction practiced in American and foreign schools Bound with this is Bible stories and poems from Creation to the Captivity, Superintendent's edition. 351 p. illus., plates.

2037. **Fitch, Albert Parker.** Religion and the undergraduate. Harvard graduates' magazine, 23: 209–14, December 1914.

Discusses the conditions at Harvard, where although half the student body is religiously disposed, only a small percentage of it is reached.

2038. **Förster, F. W.** The foundations of Christian education. Educational times (London) 67: 532–34, December 1, 1914.

Lecture delivered at the 18th German evangelical congress, Cassel, 1913. Translated by S. E. Howe. To be continued.

2039. **International Sunday-school association. Commission for the study of the adolescent period.** The teens and the rural Sunday school, being the second volume of the report of the Commission on adolescence, authorized by the San Francisco convention of the International Sunday school association . . . Ed. by John L. Alexander. New York [etc.] Association press, 1914. 151 p. 12°.

2040. **Lawrence, William.** Religious liberty and religious education. Constructive quarterly, 2: 868–73, December 1914.

## MANUAL AND VOCATIONAL TRAINING.

2041. **Brown, John B.** The Interlaken school for young men. Indian school journal, 15: 175–78, December 1914.

Secondary school at Laporte, Indiana which prepares students for life-work. Illustrated.

2042. **Cheney, Howell.** A Wisconsin experiment in vocational education and some of its lessons. Elementary school journal, 15: 191–209, December 1914.

The Wisconsin system was investigated by experts. Writer sums up the points of agreement. Says that most of the teachers are not qualified for vocational or trade work.

2043. **Davenport, Eugene.** Vocational education and the state. School and home education, 34: 131–33, December 1914.

Abstract of a paper read before the meeting of the city superintendents and school boards at the University of Illinois, November 19, 1914.

The author does not think a separate system of vocational schools is advisable or necessary. Advocates the unit system for liberal and vocational public education.

2044. **Dewey, John.** A policy of industrial education. New republic, 1: 11–12, December 19, 1914.

Author says that the problem in this country is primarily an educational one—that of the reorganization of the public school to meet the changed conditions due to the industrial revolution.

2045. An experimental summer industrial school. American school board journal, 49: 19, 66, December 1914.

Tells of a free school for retarded boys organized during the past summer under the direction of Mr. Frank M. Leavitt, professor of industrial education in the School of education at the University of Chicago.

2046. **Hasty, Philip S.** Some conclusions with reference to prevocational work in the public schools. Manual training and vocational education, 16:208–13, December 1914.

2047. **Leavitt, Frank M.** Classroom methods and devices. Elementary school journal, 15:185–90, December 1914.

Introducing a series of articles on "the adaptation of regular school subjects to the needs of prevocational boys."

2048. **Lorentz, Friedrich.** Gewerbehygienische belehrungen an fach- und fortbildungsschulen. Zeitschrift für schulgesundheitspflege, 27:613–18, no. 9, September 1914.

Demands instruction in hygienic principles and processes of the prevention of occupational diseases. In the continuation school the instruction should be given in connection with the courses on industrial materials and processes. A course of studies, covering three years, is suggested.

2049. **Lull, Herbert G.** The relation of vocational to academic instruction. Manual training and vocational education, 16:201–7, December 1914.

"Approaching his subject historically, [the author] concludes that the vocational significance of manual training is the source of its educational value, that manual training is becoming vocationalized, that vocational training is outgrowing its narrow trade character, and that the two will merge in the high school."

2050. **Meek, Charles S.** The coordination of industrial studies with traditional subjects in the high school curriculum. School review, 22:666–72, December 1914.

Conditions in high school of Boise, Idaho. Introduction of industrial education into the curriculum has not crowded out cultural education, but has increased registrations in strictly cultural subjects.

2051. **Rapeer, Louis W.** Industrial hygiene and vocational education. Educational review, 43:467–74, December 1914.

Makes a strong plea for the study of industrial hygiene. Says that hygienic education is an indispensable phase of vocational training. Millions of workers suffer from lowered vitality and other ills, and yet educators "clamor for the costly tools for a narrow type of vocational training," while at the same time they neglect instruction in health conditions of workers. Germany, England, and Austria have accomplished much in medical examinations and follow-up work. The Manhattan trade school for girls, New York city, is meeting the urgent necessity for such sanitary and corrective work.

2052. **Ricketts, Palmer C.** History of Rensselaer polytechnic institute, 1824–1914. [2d ed.] New York, J. Wiley and sons, 1914. xiii, 269 p. illus. 8°.

2053. **Spühler, J.** Die wirtschaftliche aufgabe der schule. Schweizerische lehrerzeitung, 59:367–69, 376–77, September 26, October 3, 1914.

Industrial and vocational training, vocational guidance, and civic education are the imperative need of the schools. Quotes from Treitschke: "Not ideas—action determines the destinies of nations."

## VOCATIONAL GUIDANCE.

2054. **Davis, Jesse Buttrick.** Vocational and moral guidance. Boston, New York [etc.] Ginn and company [1914] viii, 303 p. 12°.

The book recognizes the intensely practical as well as the theoretical aspects of the subject, and outlines actual methods of procedure—with definite suggestions from public-school teachers, librarians, and Y. M. C. A. secretaries who have done the work; with charts, outlines, and card systems that have proved valuable; and with suggested reading lists for counselors and for young people.

## AGRICULTURE, HOME GARDENING.

2055. **Benson, O. H.** Boys' and girls' club work. Journal of education, 80:509–11, November 26, 1914.

Home garden, field crop, and canning.

2056. **Hummel, W. G.** Utilization of land by high schools teaching agriculture. University of California chronicle, 16:431–42, October 1914.

Discusses the school farm and its proper equipment. Says that the school farm is "one of the most effective means of promoting the popularity of high-school agriculture."

2057 **True, A. C.** Address of the president of the Association of American agricultural colleges and experimental stations. Science, n. s., 40:757–66, November 27, 1914.

Says that more attention should be given to perfecting collegiate courses of instruction for the general body of agricultural students, also to improving courses for teacher training for the regular work of the colleges, for extension work, and for secondary schools.

## HOME ECONOMICS.

2058. **Arnold, Sarah Louise.** Fundamental conceptions of home economics. Journal of home economics, 6:421–29, December 1914.

Address presented at the seventh annual meeting of the American home economics association, Cleveland, 1914.

2059. **Rice, Melvin.** The practical operation of school lunchrooms. American school board journal, 49:17–18, December 1914.

2060. **Snedden, David.** Current problems in home economics. Journal of home economics, 6: 430–37, December 1914.

"Presented at the seventh annual meeting of the American home economics association, Cleveland, 1914. Dr. Snedden's address is given in part."

Dr. Snedden's views of future social conditions and criticisms of current methods of instruction.

## PROFESSIONAL EDUCATION.

2061. **Harrington, Thomas F.** Medical problems in education. The responsibility of the medical profession. Boston medical and surgical journal, 171: 839–45, December 3, 1914.

Discusses the findings of medical inspectors of schools. Work in Chicago, Boston, etc.

2062. **Kirk, Edward C.** The tendencies in dental education. Dental cosmos, 56: 1297–1302, December 1914.

Advocates the necessity of enlarging the scope and improving the character of the special dental curriculum so as to adequately meet modern educational demands.

2063. **Lee, Frederic S.** The relation of the medical sciences to clinical medicine. Journal of the American medical association, 63:2083–88, December 12, 1914.

Importance of science to the medical student. Says that teachers of the clinical subjects fail if they do not hold to "a rigid scientific ideal in their outlook over the details of practical medicine."

2064. **Lile, William Minor.** Legal education and admission to the bar in the Southern states. An address delivered before the Kentucky state bar association at Mammoth Cave, Kentucky, July 8, 1914. Louisville, Ky., Westerfield-Bonte co., inc. [1914] 23 p. 8°.

## CIVIC EDUCATION.

2065. **Dunn, Arthur William.** The community and the citizen. Rev. and enl. Boston [etc.] D. C. Heath & co. [1914] xvi, 313 p. illus. 12°.

Introduction for teachers: p. vii–xvi.

2066. **Hill, Mabel.** The teaching of civics. Boston, New York [etc.] Houghton Mifflin company [1914] x, 146 p. 12°. (Riverside educational monographs, ed. by H. Suzzallo)

Offers a series of very concrete suggestions, to aid teachers in the application of the "vital principles of the new teaching of civics."

2067. **Jenks, Jeremiah W.** University influence on civic life. Religious education, 9: 515–19, December 1914.

Discusses the subject under the following headings: Research; Counsel to the public; Teaching; Practice, and Influence upon citizens.

2068. **National conference on universities and public service.** The college and the city. A series of addresses delivered at the National conference on universities and public service, held under the auspices of Committee on practical training for public service of the American political science association. Ed., with an introduction, by Edward A. Fitzpatrick, executive secretary of the conference. 75 p. 8°.

Reprinted from Proceedings of first National conference on universities and public service, New York, May 12, 13, 1914.

CONTENTS.—1. J. P. Mitchel: The college and the city.—2. R. F. Cutting: Democracy and a trained public service.—3. F. G. Hicks: An ideal municipal university.—4. C. A. Beard: New York as a political science laboratory.—5. S. M. Lindsay: New York as a sociological laboratory.—6. Albert Shiels: The opportunity of the College of the city of New York.—7. J. W. Jenks: What a college of administration might do for New York.—8. S. P. Duggan: The College of the city of New York and community service.—9. R. S. Binkerd: A new educational development.—10. P. R. Kolbe: A demonstration of university and governmental cooperation: the next step.—Appendix: Proposed plans for training schools for public service.

## EDUCATION OF WOMEN.

2069. **Maynard, Constance L.** From early Victorian schoolroom to university. Nineteenth century, 76: 1060–73, November 1914.

Higher education of women in England. Advantages derived from a collegiate education; influence on character, etc.

2070. A notable experiment in co-education. World's work (London) 24: 578–88, November 1914.

Work at "Bedales," England. A plea for co-education. Illustrated.

2071. **Sturm, Marie.** Die frauenschule und der gebildete mittelstand. Frauenbildung, 13: 433–37, 9. heft, 1914.

Suggests a reconstruction of the Prussian "frauenschulen," which have not been as successful as had been anticipated.

2072. **Van Kleeck, Mary.** Working girls in evening schools; a statistical study. New York, Survey associates, inc., 1914. xi, 252 p. illus. 12°. (Russell Sage foundation publication)

Based on a card questionnaire answered by more than 13,000 working girls attending public evening schools in New York city.

## ORIENTALS.

2073. **Carpenter, J. E.** An ancient Buddhist university. Hibbert journal, 13: 175–89, October 1914.

History and work of an institution at Chang'an, China, founded in 629 A. D., by Yuan Chwang. Philosophy of Buddhism.

2074. **Lobingier, Charles S.** America's torch-bearing in Asia. American review of reviews, 50: 714–17, December 1914.

Describes American mission schools in China, India and Philippines. Illustrated.

2075. **Straus, Oscar S.** Americans in Turkey; their notable work for education. American review of reviews, 50: 710–13, December 1914.

Popular illustrated article on American educational institutions in Turkey. Influence of Robert college.

## DEFECTIVE AND DELINQUENT CHILDREN.

2076. **Anderson, V. V.** The laboratory in the study and treatment of crime. Boston medical and surgical journal, 171: 803–8, November 26, 1914.

Advocates the establishment of criminological laboratories in the municipal courts of our larger cities to furnish "such a diagnosis of the criminal from psychological, neurological and sociological points of view, as might be of immediate practical aid to the judge who must sentence the defendant before the bar." Cites cases of interest, particularly among school children.

2077. **Binet, Alfred** *and* **Simon, Th.** Mentally defective children. Authorized tr. by W. B. Drummond; with an appendix containing the Binet-Simon tests of intelligence, by Margaret Drummond; an introduction by Prof. Alexander Darroch. New York, Longmans, Green & co.; London, E. Arnold, 1914. xi, 180 p. 12°.

2078. **Cummins, Robert A.** A study of defective pupils in the public schools of Tacoma, Wash. Psychological clinic, 8: 153–69, November 15, 1914.

2079. **Fraser, Kate.** Feeble-minded children . . . School hygiene (London) 5: 213–223, November 1914.

Concluded from October number of School hygiene, p. 183. Mental deficiency in school children, with special reference to syphilis as a causative factor. Investigations by means of the Wassermann test. Gives list of references.

2080. **Hill, David S.** An experimental study of delinquent and destitute boys in New Orleans, and notes concerning preventive and ameliorative measures in the United States. New Orleans, Commission council, 1914. 130 p. illus., charts. 8°.

2081. **Petersen, Anna M.** *and* **Doll, E. A.** Sensory discrimination in normal and feeble-minded children. Training school bulletin, 11: 110–18, 135–44, November, December, 1914.

An experimental study of discrimination of lifted weights in relation to mental age.

2082. **Schauer, Richard.** "Die familie Kallikak;" ein beitrag zum stammesgeschichtlichen verständnis des einzelmenschen. Pädagogische zeitung, 39: 714–16, September 24, 1914.

A review and discussion of Dr. Henry Herbert Goddard's book on the Kallikak family.

2083. West side studies, carried on under the direction of Pauline Goldmark. Boyhood and lawlessness. The neglected girl, by Ruth S. True. New York, Survey associates, inc., 1914. xix, 215, 143 p. illus. 12°. (Russell Sage foundation publication)

## EDUCATION EXTENSION.

2084. **Cooley, Edwin G.** Bishop Grundtvig and the people's high schools. Educational review, 43: 452–66, December 1914.

Educational labors of Grundtvig in Denmark. Reviews work and ideals of the folk high schools.

## LIBRARIES AND MUSEUMS.

2085. **Bostwick, Arthur E.,** *ed:* The relationship between the library and the public school. Reprints of papers and addresses. White Plains, N. Y., and New York city, The H. W. Wilson company, 1914. 331 p. 12°.

A collection of "classic" papers by various American librarians and others, with brief introductions by the editor. The authors represented are Josephine A. Rathbone, C. F. Adams, jr., W. E. Foster, S. S. Green, Melvil Dewey, W. H. Brett, G. W. Peckham, W. R. Eastman, Lutie E. Stearns, Linda A. Eastman, C. A. McMurry, J. C. Dana, F. M. Crunden, H. L. Elmendorf, Mathilde C. Ford, Annie Carroll Moore, Effie L. Power, Irene Warren, May H. Prentice, Linda M. Clatworthy, David Felmley, Mary D. McCurdy, W. D. Johnston, and Elizabeth G. Baldwin.

2086. **Connolly, Louise.** The educational value of museums . . . ed. and with an introduction by J. C. Dana. Newark, N. J., The Newark museum association, 1914. 73 p. 8°.

2087. **Day, Mary Bostwick** *and* **Wilson, Elisabeth Kissick.** Suggestive outlines on children's literature, for the teachers of Southern Illinois. Carbondale, Ill., Southern Illinois state normal university, 1914. 88 p. 8°.

2088. **Johnston, William Dawson.** The library and history study. Library journal, 39: 883–86, December 1914.

Read at the meeting of the Minnesota educational association, St. Paul, October 23, 1914.

2089. **Minnesota educational association.** Library equipment for teaching history in Minnesota high schools. Report of the committee of five appointed by the history round table of the Minnesota educational association in 1913. Winona normal school, 11: 1–27, November 1914.

2090. **Parker, S. R.** *and* **Hall, Mary E.** What a high school library should do and how it should do it. *In* New York (City). Sixteenth annual report of the city superintendent of schools, 1913–1914. Reports on high schools for the year ending July 31, 1914. Presented to the Board of education on November 25, 1914. p. 43–50.

## BUREAU OF EDUCATION: RECENT PUBLICATIONS.

2091. Educational directory, 1914–15. Washington, 1914. 163 p. (Bulletin, 1914, no. 43)

2092. Library instruction in universities, colleges, and normal schools; compiled by Henry R. Evans. Washington, 1914. 38 p. (Bulletin, 1914, no. 34)

2093. Report on the work of the Bureau of education for the natives of Alaska, 1912–13. Washington, 1914. 62 p. plates, map. (Bulletin, 1914, no. 31)

2094. The training of teachers in England, Scotland, and Germany; by Charles H. Judd. Washington, 1914. 86 p. (Bulletin, 1914, no. 35)

# MONTHLY RECORD OF CURRENT EDUCATIONAL PUBLICATIONS

COMPILED BY THE LIBRARY DIVISION OF THE BUREAU OF EDUCATION, UNDER THE DIRECTION OF JOHN D. WOLCOTT, CHIEF OF DIVISION

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# MONTHLY RECORD OF CURRENT EDUCATIONAL PUBLICATIONS.

CONTENTS.—Introductory notes—Educational history and biography—Current educational conditions—Pedagogics and didactics—Educational psychology; Child study—Special subjects of curriculum—Kindergarten and primary school—Rural education—Secondary education—Teachers: Training and professional status—Higher education—School administration—School management—School architecture—School hygiene and sanitation—Sex hygiene—Physical training—Play and playgrounds—Social aspects of education—Moral and religious education—Manual and vocational training—Vocational guidance—Home economics—Commercial education—Nurse training—Civic education—Military training—Education of Indians—Defective and delinquent children—Libraries and reading—Bureau of Education: Recent publications—New periodicals—Bulletin of the Bureau of Education.

## INTRODUCTORY NOTES.

The following is a selection of representative books and articles listed in the present bulletin, the numbers in parentheses referring to the numbers of the full entries: Aurner, History of education in Iowa (1); Butte school survey report (6); Chapman, Individual differences in ability and improvement (16); Freeman, Teaching of handwriting (34); Claxton, The American rural school (56); Dabney, The municipal university (76); Coffman, The American school superintendent (84); Curtis, Education through play (104); Gladden, Religion and schools (114); Durell, Fundamental sources of efficiency (121); National conference on universities and public service, Proceedings (134); Schoff, The wayward child (143).

A new series of item numbers, to cover publications entered during 1915, begins in the present issue of the record, and will continue for one year, ending in the bulletin for January, 1916. An index to the record from February, 1914, to January, 1915, inclusive, comprising the 1914 entries, is now in preparation, in order to facilitate the use of these bulletins as an annual bibliography of education for 1914.

Only publications of the Bureau of Education are available for free distribution by this office. All others here listed may ordinarily be obtained from their respective publishers, either directly or through a dealer, or, in the case of an association publication, from the secretary of the issuing organization.

Books, pamphlets, etc., intended for inclusion in this record should be sent to the library of the Bureau of Education, Washington, D. C.

## EDUCATIONAL HISTORY.

1. **Aurner, Clarence Ray.** History of education in Iowa. Iowa City, Ia., State historical society of Iowa, 1914. vols. 1, 2. 8°.

2. **Boyd, William K.** Some phases of educational history in the South since 1865. *In* Studies in Southern history and politics, inscribed to William Archibald Dunning, Ph. D., LL. D., Lieber professor of history and political philosophy in Columbia university, by his former pupils the authors. New York, Columbia university press, 1914. p. 259-87.

   Contains sections on The rise of public school systems, Changes in higher education, and The education of the negro.

3. **Fitzpatrick, Frank A.** The development of the course of study in American schools. Educational review, 43: 1-19, January 1915.

   An historical résumé of the growth and development of the elementary schools of Boston, from 1647 to 1885, showing courses of study.

4. **Mulgrew, Frank.** A real Dotheboys Hall. Cornhill magazine (London) 37: 818-30, December 1914.

   Describes a school in Yorkshire, called Eden Hall, kept by Richard Robinson and Mr. Aislabie, that was the counterpart of the Dotheboys Hall of Charles Dickens' story. Joshua Walmsley, who attended the school in the year 1807, has left us a graphic account of the treatment he received.

## CURRENT EDUCATIONAL CONDITIONS.

5. **Brahn, Max.** Pädagogische neuwertungen durch den krieg. Archiv für pädagogik. I. teil. Die pädagogische praxis, 3: 2-9, November 1914.

   The effects of the war will be: 1. Even greater emphasis upon the technical sciences. 2. Serious reflection upon the final ends of personal and civic life. 3. A heightened sense of "the significance of nationality, the feeling for the unity of the nation." The "einheitsschule" will emerge. Civic education will receive a strong impetus. 4. Education through the instrumentality of the "arbeitsschule" will lay greater emphasis upon independent and productive activity.

6. **Butte, Mont. Survey commission.** Report of a survey of the school system of Butte, Montana. Submitted to the Board of school trustees, June 2, 1914. [Butte? Miner print, 1914] ix, 163 p. plates, plans, fold. tables, diagrs. 8°.

   George D. Strayer, director of the survey.

7. **Cantilo, José Luis.** La desorientación argentina. Monitor de la educación común, 51: 254-66, November 30, 1914.

   Says that to take her rightful place among the great powers of the world, the Argentine Republic must reorganize and improve her educational system, modeling it upon that of the leading European nations and that of the United States.

8. **Deyoe, Albert M.** Public school activities in Iowa. Midland schools, 29: 147-53, January 1915.

   Annual address before the Iowa state teachers' association, November 8, 1914.

9. **Eliot, Charles William.** Educational evolution. School and society, 1: 1-8, January 2, 1915.

   Address on the occasion of the inauguration of John H. Finley, as Commissioner of education of the state of New York.

10. **Quebec** (*Province*) **Department of public instruction.** Education in the province of Quebec. Quebec, Department of public instruction, 1914. 130 p. 8°.

    "Prepared by Dr. G. W. Parmelee, the English secretary of the Department of public instruction, with the collaboration of Mr. J. C. Sutherland."

11. **Vitale, Ferruccio.** Education in Italy. Home progress, 4: 817-21, January 1915.

## PEDAGOGICS AND DIDACTICS.

12. **Allison, Samuel B.** Notes on Bergsonian pedagogy. Educational bi-monthly, 9: 97–113, December 1914.

13. **Bagley, W. C.** The "informational" subjects again: the large value of "points of view" and "mental perspectives." School and home education, 34: 166–70, January 1915.

14. **Keys, Florence V.** Academic superstition and democracy. Yale review, 4: 378–90, January 1915.

An argument for more democracy in academic education. Upon the education of youth depends the stability of our social order. Presents an interesting study of the advancement of women's education.

15. The passing of the educated man. Unpopular review, 3: 76–87, January–March 1915.

A plea for a more comprehensive education. Deprecates the latest developments of our educational system, where not only are vocational subjects more and more included, but "the vocational interpretation is put upon even the most theoretical studies." Out of such a conception of education does "not grow great philosophy, nor great literature, nor a great system of ethics."

## EDUCATIONAL PSYCHOLOGY; CHILD STUDY.

16. **Chapman, James Crosby.** Individual differences in ability and improvement and their correlations. New York city, Teachers college, Columbia university, 1914. iii, [1], 45 p. diagrs. 8°. (Teachers college, Columbia university. Contributions to education, no. 63)

Pub. also as thesis (Ph. D.) Columbia university, 1914.

Bibliography: p. 45.

17. **Hill, David Spence.** Annual report to the superintendent of schools. Measurements in elementary education. New Orleans, Division of educational research, Department of superintendence of public schools, September 1914. 71 p. fold. tables. 8°.

CONTENTS.—I. Studies of the progress of 36,284 school children in New Orleans and related questions.—II. The educational laboratory.—III. Concerning industrial education.

18. **Hylla, Erich.** Meumanns vorschläge zur ausgestaltung der Binetschen intelligenzprüfungsmethode. Archiv für pädagogik. II. teil. Die pädagogische forschung, 3: 16–22, November 1914. (To be concluded.)

A critical review of the second edition of Meumann's "Vorlesungen zur einführung in die experimentelle pädagogik." Points out the lack of sufficient emphasis upon the methodology of the tests.

19. **Koch, Katrina.** The development of a vocabulary in the adolescent. Educational review, 43: 68–73, January 1915.

20. **Lowe, L. A.** Discipline and individuality. Child-welfare magazine, 9: 155–58, January 1915.

To be continued.

Discusses both mental and moral discipline.

21. **Manuel, Herschel T.** The use of an objective scale for grading handwriting. Elementary school journal, 15: 269–78, January 1915.

Results obtained from a study of the Ayres measuring scale for handwriting, from "the viewpoint of the variability in the grades assigned to the same writing when the scale is used."

22. **Petersen, Anna M.** *and* **Doll, E. A.** Sensory discrimination in normal and feeble-minded children. Training school bulletin, 11: 135–44, December 1914.

References, p. 144.

This is the second and final instalment of the study of sensory discrimination. The first instalment appeared in the November number of this Bulletin.

23. **Phillips, Byron A.** The Binet tests applied to colored children. Psychological clinic, 8: 190–96, December 15, 1914.

    In summarizing, the author says that "the colored children are retarded to a much greater extent both pedagogically and psychologically than the white children; and secondly, that the white children are accelerated to a much greater extent than the colored children."

24. **Pintner, Rudolf** *and* **Paterson, Donald G.** Experience and the Binet-Simon tests. Psychological clinic, 8: 197–200, December 1914.

25. **Starch, Daniel.** The measurement of efficiency in reading, writing, spelling and English. Madison, Wis., The College book store, 1914. 33 p. diagrs.

26. **Thorndike, Edward L.** The significance of the Binet mental ages. Psychological clinic, 8: 185–89, December 15, 1914.

27. **Waldo, Kate Douglas.** Tests in reading in Sycamore schools. Elementary school journal, 15: 251–68, January 1915.

    Says that "great variation exists in reading ability between different individuals in the same grade, and many children in lower grades are much better readers than the average of the upper grades." Gives bibliography.

28. **Witham, Ernest C.** A minimum standard for measuring geography. American school board journal, 50: 13–14, 66, January 1915.

    "This article contains the test for measuring sixth grade geography, or the geography of the United States, together with some interesting results obtained from the use of the test."

## SPECIAL SUBJECTS OF CURRICULUM.

29. **Barber, Fred D.** The present status and real meaning of general science. School review, 23: 9–24, January 1915.

    Thinks that science teaching in the high schools has become too highly specialized. Makes a plea for organized courses in general science. Says: "If general science is to be of educational value, it must consist of well-organized units of instruction." Data based upon a questionnaire sent to 180 schools, which offer a course called general science.

30. **Benjamin, C. H.** Spanish for engineering students. Bulletin of the Society for the promotion of engineering education, 5: 37–48, December 1914.

    Considers the advantages of Spanish as a substitute for French or German for engineering students.

31. **Cooper, Lane.** The teaching of English and the study of the classics. Educational review, 43: 37–47, January 1915.

    Discusses the mental discipline derived from a study of the classics. When imbued with the spirit of Greek and Latin verse, a freshman is "in some measure armed against the insidious attacks of bad taste" as exemplified in much of English literature.

32. **Coulter, John M.** The mission of science in education. School review, 23: 1–8, January 1915.

    Recommends extending the time given to science instruction, so that its natural units may be developed, and also better teaching all along the line. Declares that science teaching in the high schools has not been a failure.

33. **Downing, Elliot R.** Some data regarding the teaching of zoology in secondary schools. School science and mathematics, 15: 36–43, January 1915.

    Gives information obtained from answers to a questionnaire sent to about 300 superintendents of schools.

34. **Freeman, Frank N.** The teaching of handwriting. Boston, New York [etc.] Houghton Mifflin company [1914] x, 157 p. illus. 12°. (Riverside educational monographs, ed. by H. Suzzallo.)

35. **Greenberg, Morris.** The New York city high school art exhibition. School-arts magazine, 14: 314–22, January 1915.

    This remarkable exhibition, which was held in New York city on October 16, 17, and 19, 1914 was a revelation to the public, not only from the standpoint of art but on account of the high technical quality displayed. Illustrated.

36. **Hahn, H. H.** Emphasis in teaching United States history. Middle-west school review, 7: 14-15, December 1914.

Gives four tables showing where text-book makers place the emphasis in American history. Thirteen text-books were examined to show the number of pages devoted to each period in American history.

37. **Humphries, Florence Y.** Effort vs. accomplishment. English journal, 3: 603-11, December 1914.

A discussion of the question of uniformity in the grading of English papers. Thinks papers should be graded on accomplishment rather than on effort.

38. **John, Louise.** The place of Latin in the modern educational scheme. Ohio educational monthly, 64: 4-9, January 1915.

This is written by one who has taught Latin in the high schools for 15 years. She says that Latin should not be offered earlier than in the third year of the course, and that then it should be an elective.

39. **Kepner, W. H.** Placing science courses in the curriculum of secondary schools. Virginia journal of education, 8: 241-45, January 1915.

40. **Lang, Helen R.** Lost motion in the teaching of English. English journal, 3: 631-43, December 1914.

I. Literature.

Discusses the teaching of English in the high schools, and the failure of teachers of English as a body to achieve results that are in any way commensurate with the effort put forth.

41. **Leavitt, F. M.,** *and* **Harms, L. A. P.** Science for prevocational boys. Elementary school journal, 15: 243-50, January 1915.

Correlation between science and drawing, mathematics and science, etc. Students study a general science text-book and other supplementary data, and "make notebooks which, when completed, constitute illustrated text-books covering almost the entire work given in the subject. Demonstrations are given by the teacher to arouse interest and to make the work concrete."

42. **Miller, G. A.** The training of mathematics teachers. School science and mathematics, 15: 1-12, January 1915.

Read before the Mathematics section of the Central association of science and mathematics teachers, Chicago, November 27, 1914.

43. **Miller, George J.** Essentials of modern geography and criteria for their determination. Journal of geography, 13: 129-35, January 1915.

Read at the Minnesota educational association meeting, St. Paul, October 23, 1914.

44. **Nichols, Walter H.** The high-school play. English journal, 3: 620-30, December 1914.

A plea for the recognition of the drama in the large high school.

45. **Parker, Edna.** The best methods of teaching temperance. Middle-west school review, 7: 11-12, January 1915.

46. **Reed, A. G.** English in the high school. Louisiana school work, 3: 15-21, January 1915.

A paper read at the meeting of the High school principals held at Baton Rouge, December 10-11, 1914.

Considers the aims in teaching composition and rhetoric, literature, grammar, and spelling in the high school, and the organization of the work.

47. **Russell, William F.** Early methods in teaching history in secondary schools. Part I. History teacher's magazine, 6: 14-19, January 1915.

"It is proposed first to consider the general methods in use during the first four decades of the nineteenth century; second, to note the various teaching devices and aids to classroom instruction as they were introduced, and third, to attempt to trace the effect upon classroom procedure through their incorporation in the text-books."

48. **Scherger, George L.** Public speaking in professional schools. What should be our aims and how we may attain them. Public speaking review, 4: 97–103, December 1914.

49. **Webb, Harrison E.** Grammar school mathematics. Mathematics teacher, 7: 37–48, December 1914.

50. **Williams, S. Horace.** The teaching of spelling. Journal of education, 80: 665–66, December 31, 1914.

"This discussion on the psychology and pedagogy of spelling will be given in four topics, as follows: The aims, The fundamental principles, The development method, Results and conclusions."

51. **Wilmanns, ———.** Zur frage des zeichenaufsatzes. Zwei schüleraufsätze. Zeitschrift für lateinlose höhere schulen, 26: 5–21, December 1914.

The "illustrated composition" has been developed, independently, in the schools of Lübeck and Munich. This article includes reproductions of two such compositions, with the completed drawings.

## KINDERGARTEN AND PRIMARY SCHOOL.

52. **Ashford, F.** Sense-plays and number-plays for the school and nursery. Boston, New York, and Chicago, Houghton Mifflin company [1915]. 101 p. 12°.

53. **Hillegas, M. B.** The kindergarten and the school. Kindergarten review, 25: 291–95, January 1915.

Address given at the International kindergarten union convention, Springfield, Mass.

54. **Prüfer, Johann.** Zur kritik der Montessorimethode. Archiv für pädagogik. I. teil. Die pädagogische praxis, 3: 21–24, November 1914.

Madame Montessori challenges comparison with Froebel, but in her system she denies to the child the freedom and initiative which are the essence of Froebelian pedagogy. There is only one way to use the material designed by her, the "correct" one, hence there is no opportunity for the play of fancy and the development of creativeness.

## RURAL EDUCATION.

55. **Browne, T. E.** The teacher's opportunity in solving the rural problem. Training school quarterly, 1: 117–21, October–December 1914.

56. **Claxton, P. P.** The American rural school. Some suggestions for its improvement. School and society, 1: 37–50, January 9, 1915.

Address delivered before Section L of the American association for the advancement of science, at Philadelphia, December 31, 1914.

57. **Johns, W. A.** Community work in the one-teacher rural school. Ohio teacher, 35: 204–5, December 1914.

58. **Van Wie, Anna.** The rural school beautiful. Middle-west school review, 7: 24–25, 41, December 1914.

59. **Wood, Thomas D.** Minimum sanitary requirements for rural schools, proposed by the joint committees on health problems in education of the National council of the National education association and of the American medical association. Chicago, Press of American medical association, 1914. 8 p. 8°.

Also in Journal of education, 80: 627–28, 636, December 24, 1914.

## SECONDARY EDUCATION.

60. **Judd, Charles H.** The junior high school. School review, 23: 25–33, January 1915.

Says: "Where the six-six plan means nothing but the transfer of two grades from one jurisdiction to the other, it is not worth adopting. The six-six plan, if it is to justify itself, must effect some real economies. There must be broader opportunities offered to students."

61. **Russell, William F.** Economy of time in secondary education. Educational review, 43: 20–36, January 1915.

Writer says that if "the teachers and curriculum makers of the American secondary schools will only aim at something in particular, and make the best use of modern psychology and sociology in getting there, that tremendous economy will be effected." The American school curriculum is often criticised because it is not vital. Mathematics, sciences, languages, history, and even English are taught with "no bearing upon practical consequences." Writer compares Continental systems of education with our own, etc.

62. ———. Economy of time in secondary education through the improvement of instruction. High school quarterly, 3: 105–109, January 1915.

63. **Sexson, J. A.** The reconstructed high school. Public schools, 1: 6–9, December 1914.

The high school and its curriculum.

## TEACHERS: TRAINING AND PROFESSIONAL STATUS.

64. **Kronshage, Theodore,** *jr.* The service rendered by the normal schools of Wisconsin. Normal school bulletin, 1: 67–75, December 1914.

Address delivered at the State teachers' association, November, 1914.

65. **Memorandum** submitted in behalf of the teachers in the employ of the Board of education of the city of New York, against the proposal to require said teachers to render compulsory service in the summer schools and other summer activities conducted by said board. New York, The Evening post job printing office [1914] cover-title, 43 p. 8°.

Prepared by a committee of the presidents of various teachers' associations of New York city.

66. **Palmer, George Herbert.** Trades and professions. Boston, New York [etc.] Houghton Mifflin company [1914] xiii, 36 p. 12°. (Riverside educational monographs, ed. by H. Suzzallo.)

An address delivered before the University of the state of New York at its 50th annual convocation in Albany, October 22, 1914, discussing the nature of a profession and its difference from a trade, with special reference to teaching.

67. **Sluys, A.** La enseñanza de la paidología en la escuela normal y en la universidad. Monitor de la educación común, 51: 198–210, November 1914.

68. A symposium—The essential factors in success as a teacher. High school quarterly, 3: 89–98, January 1915.

"We present for the thoughtful introspective study of teachers the mature judgment of a number of leading educators North and South as to the essential factors that go to make up the successful teacher."—The Editors.

69. **Wiechardt, August Julius.** Are teachers in institutions of higher learning adequately compensated? Bulletin of the Society for the promotion of engineering education, 5: 22–36, December 1914.

In summarizing the author says: "It would certainly seem that any thoughtful person, and especially any one interested in the success of higher education, would be irresistibly forced to the conclusion that men engaged in such work are not adequately compensated, and that the gross salary for a full professor should not be less than thirty-two hundred dollars annually."

## HIGHER EDUCATION.

70. **New England association of colleges and preparatory schools.** Twenty-ninth annual meeting, November 6–7, 1914, Brown university. Education, 35: 265–328, January 1915.

Contains: 1. C. W. Eliot: What is the college for? The place of culture, p. 271–77. 2. E. L. Thorndike: The disciplinary values of studies: a census of opinions, p. 278–86. 3. W. E. Hocking: What is the college for? The place of preparation, p. 287–300. 4. A. E. Stearns: What is the college for? The place of athletics, p. 301–11. 5. Alexander Meiklejohn: The place of student activities, p. 312–19. 6. J. H. Finley: The ideal college, p. 320–28.

Paper no. 1 declares that "the great function of national education is the transmission of the national ideals." The best environment for culture is that of the school, academy, university, or church. The college provides the society in which true culture can be attained.

Paper no. 2 is a study based upon replies to a questionnaire sent to teachers. Writer says: "In my opinion the small amount of the differences in disciplinary value, as per the opinions, and the disagreement concerning the existence of even the greatest of them, justify the inference that the so-called cultural and utilitarian values of school subjects enormously outweigh their disciplinary values as criteria for selection and credit in a total curriculum, and especially in the required fraction of a curriculum."

Paper no. 3 says that the moving factors of life are the spirit of work, the cult of religion, and the participation in the state. Shows the effect of the college upon these factors.

71. Academe and Mayfair. Unpopular review, 3: 102–17, January-March 1915.

Discusses the question of the social status of American college professors.

72. Academic freedom—a confession. [By "Professor Ordinarius"] New republic, 1: 17–18, January 2, 1915.

Says that in the field of "the social sciences new tendencies and new demands make imperative not only an appeal to the ideal of academic freedom, but a thorough-going definition of that appeal which will stand firm under criticism and direct assault."

73. **Burg, John C.** University registration statistics. Science, 40: 919–26, December 25, 1914.

Gives the registration returns for November 1, 1914, of thirty of the universities of the United States. "Statistics show *only* the registration in the universities considered. There is no intention to convey the idea that these universities are the thirty largest universities in the country, nor that they are necessarily the leading institutions." The following universities show "the largest gains in terms of student units, including the summer attendance, but making due allowance by deduction for the summer session students who returned for instruction in the fall: Columbia (1,365), California (1,109), Pittsburgh (1,069), Ohio State (832), Wisconsin (806), Harvard (784), New York university (634), Minnesota (552), Pennsylvania (536), Illinois (405), Nebraska (349), Cornell (327), Cincinnati (319), and Michigan (311)."

74. **Cooper, Clayton Sedgwick.** World-wide education. English vs. American student life. Educational foundations, 26: 265–79, January 1915.

The subject is discussed under the following headings: Administrative contrasts, Moral discipline, Athletic oneness, College society life, Society in fraternities, College spirit, and, The college man and the state.

75. **Coursault, Jesse H.** Standardizing the junior college. Educational review, 43: 56–67, January 1915.

Describes an experiment by the University of Missouri. First important result was the improvement in the colleges themselves. "Advice given by the university was followed willingly and promptly. Faculties were recruited with better prepared teachers."

76. **Dabney, Charles William.** The municipal university. School and society, 1: 73–80, January 16, 1915.

Address before the National association of state universities, Washington, D. C.

77. **Farwell, H. W.** Training for action. Popular science monthly, 86: 76–79, January 1915.

Writer claims that the existing college curricula need revision "to the end that the average student may at least know what business ability is, and whether or not he himself possesses it in small measure or in large."

78. **Fox, Dixon Ryan.** A country boy and a city college. Columbia university quarterly, 17: 68–81, December 1914.

A moving story giving an "illustration of the intimate commingling of the University and life about it. It is a story true to the experience of many hundreds of Columbia men, who have come to us from the country."—Editorial comment.

79. **Fullerton, George Stuart.** Impressions of Austrian university life. Columbia university quarterly, 17: 27–39, December 1914.

80. **Hewitt, John H.** Williams college and foreign missions. Biographical sketches of Williams college men who have rendered special service to the cause of foreign missions. Boston, New York [etc.] The Pilgrim press [1914] 641 p. illus. 8°

81. **Reuben, Milton H.** An undergraduate's view of college education. Educational review, 43: 48–55, January 1915.

A sympathetic view of a college education. The higher education makes for development of character; the training for intelligent citizenship; hygienic methods of living; and attainment of culture.

82. **Sumner, Charles Burt.** The story of Pomona college. Boston, New York [etc.] The Pilgrim press [1914] xiii, 417 p. illus. 8°.

83. **Thwing, Charles F.** The intellectual new birth. Educational foundations, 26: 280–87, January 1915.

Deals with the awakening of the intellectual powers, which, in most persons, comes between the years of 17 and 21, the college age.

## SCHOOL ADMINISTRATION.

84. **Coffman, Lotus D.** The American school superintendent. Educational administration and supervision, 1: 13–28, January 1915.

Read before the Illinois schoolmaster's club, Peoria, October 30, 1914.

85. **Cubberley, Ellwood P.** Fundamental problems in educational administration. Educational administration and supervision, 1: 3–12, January 1915.

Deals principally with the administrative problems of the State.

86. **Deffenbaugh, W. S.** School administration problems in small cities. American school board journal, 50: 9–11, January 1915.

87. **Minnesota. Public education commission.** Report to the governor. December 1, 1914. [St. Paul? 1914] 32 p. 8°.

88. **Nebraska. Commission to revise the school laws.** Report of the commission appointed by Gov. John H. Morehead to revise the school laws of Nebraska. Lincoln, The Woodruff press, 1914. 43 p. 8°.

89. **Scott, Fred N.** Efficiency for efficiency's sake. School review, 23: 34–42, January 1915.

Says that "the most efficient things in teaching are not . . . susceptible of adequate quantitative measurement. They are such things as personality, sympathy, sincerity, enthusiasm, intuition of character," etc. Efficiency tests are carried too far. Author is not hostile, however, to the efficiency movement, but has his doubts of the efficacy of tests where spiritual factors and ideal values are concerned.

90. **Unger, J. J.** The county unit of organization. School news of New Jersey, 4: 6–8, December 1914.

To be continued in next issue.
Address delivered before the Council of education, Newark, N. J., October 1914.

## SCHOOL MANAGEMENT.

91. **Griffin, Joseph T.** Executive ability in class management. Teachers magazine, 37: 169–73, January 1915.

Discusses the phase of teaching which affects the judgment of the marking official. This phase of teaching work is discussed under the following topics: Punctuality and regularity, Absence of teachers, and, Compliance with official suggestions.

92. No home study. Primary education, 23: 62, January 1915.

The new course of study in use in the schools of Sacramento, Cal., abolishes home study. The time schedule for the primary grades is given.

93. **Roe, William S.** Evaluation of educational results. Colorado school journal, 30: 5–8, December 1914.

A few heresies concerning our present marking systems.

## SCHOOL ARCHITECTURE.

94. **Herricht, A.** Sicherung der schulgebäude gegen blitz. Schulhaus, 16: 433–38, heft 9–10, 1914.

A statement of the principles and methods of securing school buildings against fire and damage by lightning. Six drawings.

95. **Hildebrandt, P.** Kinematographie und schule. Schulhaus, 16: 443–47, heft 9–10, 1914.

The use of moving pictures in schools discussed from the point of view of architectural and technical requirements. Pedagogical limitation and possibilities. Pedagogical hints.

96. **Kimball, D. C.** Ventilation of school buildings. American school board journal, 50: 15–16, 63–64, January 1915.

To be continued.

97. **Schoenfelder, L.** Der stand der schulbäderfrage in Deutschland. Schulhaus, 16: 425–32, heft 9–10, 1914.

History of the practice of installing shower baths in public school buildings in Germany. Details of construction and equipment. Conclusions.

## SCHOOL HYGIENE AND SANITATION.

98. **Atkinson, D. T.** Adenoids and kindred perils of school life. New York, Vail-Ballou company [1914] 224 p. 12°.

Besides adenoids, deals with defects of eye, ear, and throat; bad postures, nervous disorders, over-pressure, effects of poor ventilation and insufficient exercise, tuberculosis, etc.

## SEX HYGIENE.

99. **Phelps, Jessie.** Sex hygiene in education. American schoolmaster, 7: 433–54, December 1914.

References: p. 452–54.

Delivered in part as an address before the local Chautauqua, at Ann Arbor, Michigan, July 10, 1914.

"An attempt to set forth a few general suggestions concerning the possible teaching of the facts and laws of sex from the constructive side, and the relation which both parents and teachers have to the matter."

## PHYSICAL TRAINING.

100. **Crampton, C. Ward.** The New York city syllabus of physical training. American physical education review, 19: 647–57, December 1914.

101. Physical exercises for open air pupils. American open air school journal, 1: 8–9, December 1914.

Many inquiries have been received for suggested forms of short exercises for pupils in open air schools. A few are given here.

102. **Richards, John N.** Physical education efficiency tests for grade schools. American physical education review, 19: 637–46, December 1914.

Explains the system of efficiency tests in physical education in use in the Miller Street public school of Newark, N. J.

103. **Sevrette, Gaston.** Les sports scolaires en Belgique. Revue pédagogique, n. s. 65: 176–80, October 15–November 15, 1914.

Largely an account of the work of the Belgian Ligue d'athlétisme. The league is opposed to extreme specialization and prefers the winning of championships by groups rather than by individuals.

## PLAY AND PLAYGROUNDS.

104. **Curtis, Henry S.** Education through play. New York, The Macmillan company, 1915. xix, 359 p. illus. 12°.

CONTENTS.—1. What is play?—2. Play as physical training.—3. Play and the training of the intellect.—4. Play and the formation of habits and character.—5. Play in the German schools.—6. Play in the English schools.—7. The school playgrounds of American cities.—8. Play at the rural school.—9. The playgrounds of Gary.—10. Play in the curriculum.—11. Athletics in secondary schools and colleges.—12. Recreation at summer schools.—13. The summer playgrounds.—14. The school camp.—15. The school as a social center.—16. The training of play teachers.—Appendix: Rules for games.

Includes bibliographies.

105. **Fresno state normal school.** Playground apparatus, by W. B. Givens; with an article on the Playground movement in rural schools, by C. L. Phelps; together with an article on Suggested combinations of apparatus, by Solon W. Cunningham. California state printing office, 1914. 29 p. illus. 8°. (Fresno state normal school. Bulletin no. 1)

106. **Turner, Clair K.** The rural school playground. Teaching, 1: 19–25, December 15, 1914.

107. ———. The school playground. Teaching, 1: 4–14, December 15, 1914.

Takes up the subjects of apparatus and games for each grade.

108. **Wellington, G.** The playground's relation to intellectual, esthetic, and moral growth. Mind and body, 21: 461–64, January 1915.

## SOCIAL ASPECTS OF EDUCATION.

109. **Bruce, W. H.** The home in education. Texas school journal, 32: 15–16, 41, 44–46, January 1915.

Speaks of the great necessity of the cooperation of home and school in the education of the child.

110. **Denver (Colo.) High schools council.** Wider use of the school plant. Colorado school journal, 30: 10–13, December 1914.

A committee appointed by the Denver high schools council sent out questions to about 80 representative cities for information concerning the wider use of the school plant. This article gives some of the answers received.

111. **Phillips, J. H.** The social ideal in education. Part I. Educational exchange, 30: 5–8, January 1915.

Part I.
Address delivered before the State teachers' association of Georgia, April 24, 1914.

112. **Spaulding, J. E.** Americanizing the immigrant. Popular educator, 32: 268–69, January 1915.

An educational problem.
From an address before the Massachusetts commission on immigration.

## MORAL AND RELIGIOUS EDUCATION.

113. **Disbrow, Ruth A.** The restraint of our public schools. Educational review, 43: 84–93, January 1915.

Thinks that public school children are not at present receiving that restraint of character so necessary for self-discipline when launched into the world.

114. **Gladden, Washington.** Religion and the schools. Atlantic monthly, 115: 57–68, January 1915.

Discusses religion and public schools from every angle. Thinks that "no arrangement respecting our public schools is possible by which the problem of religious education can be adequately solved. . . . Our entire reliance for this work must be placed upon the church and the home."

115. **Harvard alumni bulletin, vol. 17, no. 15, January 13, 1915. Religion at Harvard.** illus.

Contains: 1. E. C. Moore: Religious life at Harvard—I. The university chapel; II. Phillips Brooks house, p. 252–60.—2. J. H. Ropes: Theological education at Harvard, p. 260–64.—3. J. J. Ryan: The St. Paul's Catholic club, p. 264–67.

116. **Wilson, C. W.** The work of the schools in developing moral character in the grammar grade child. Training school quarterly, 1: 139–43, October–December 1914.

Read at the North Carolina teachers assembly.

## MANUAL AND VOCATIONAL TRAINING.

117. **National society for the promotion of industrial education.** Eighth annual convention held in Richmond, Va., December 9–12, 1914. Industrial-arts magazine, 3: 43–47, January 1915.

Contains: 1. W. C. Redfield: The need of accurate information.—2. Samuel Gompers: Attitude of organized labor.—3. R. O. Small: Types of schools needed.—4. Elizabeth Cleveland: Industrial education for girls.—5. The Richmond survey.

118. **Allan, Elizabeth P.** Some impressions of Munich and its schools. Middle-west school review, 7: 20–23, January 1915.

119. **Crawshaw, F. D.** Organization of administrative material. Industrial-arts magazine, 3: 20–23, January 1915.

Fifth article of a series on the organization of administrative material in manual and industrial arts. This article deals with the care of supplies and equipment.

120. **Dodd, Alvin E.** *and* **Bawden, William T.** Report on a plan for an elementary industrial school in the city of Richmond, Va. Manual training and vocational education, 16: 271–77, January 1915.

This plan "is of special interest because it is one of the results of the recent survey in Richmond."

121. **Durell, Fletcher.** Fundamental sources of efficiency. Philadelphia and London, J. B. Lippincott company, 1914. 368 p. 8°.

"An attempt to analyze the various forms and sources of efficiency into a few elemental principles. . . . Such a presentation of the principles of efficiency may throw light on the problem of vocational and cultural studies, and perhaps suggest how the study of the principles of efficiency, as such, may be made a central study in educational systems."

122. **Henke, Frank X.** *and* **Fritsch, Edwin A.** Manual arts work of the upper grade boys at the Haines practice school. Educational bi-monthly, 9: 114–24, December 1914.

Article I—Drawing.

123. **Leavitt, Frank M.** Natural growth in industrial education. Industrial-arts magazine, 3: 1–4, January 1915.

In conclusion, the author says that "the natural growth of popular education will be stimulated when all educators become intelligent students of the methods and purposes of the newly organized vocational schools and classes of whatever type, and when they seek to inject into the present school system as much as may be of the vitality and directness of these new schools."

124. **Mosser, George H.** A vocational night school with an enrollment of over 2,000. American city, 12: 21–23, January 1915.

Description of the activities of the Altoona night school, Altoona, Pa. Illustrated.

125. **Roberts, M. Emma.** Practical art work in the public schools. Middle-west school review, 7: 5–7, January 1915.

126. **Williams, S. Horace.** Democracy and industrial education. White Mountain educator, 2: 6–7, 9–11, 5, 7, October, November, December 1914.

## VOCATIONAL GUIDANCE.

127. **Kitson, H. D.** Suggestions toward a tenable theory of vocational guidance. Manual training and vocational education, 16: 265–70, January 1915.

"Mr. Kitson points to some misconceptions concerning vocational guidance, and to the danger in the commercialization of public interest in this subject. He shows wherein the popular conception of vocational guidance is wrong and then proposes 'an amendment'."

128. **Wile, Ira S.** Vocational guidance and the curriculum. American teacher, 4: 2–7, January 1915.

Read at the fourth National conference on vocational guidance, Richmond, Va., December 8, 1914.

The writer thinks that preparation for a specific job is beyond the function of a course of study in an elementary school. Job education is the responsibility of industry.

## HOME ECONOMICS.

129. **Olin, Blanche M.** Extension work in home economics. Wyoming school journal, 11: 96–99, December 1914.

130. **Warner, Annette J.** Art in the home. Journal of home economics, 7: 8–16, January 1915.

A plea for the incorporation of art in the home and in home economics.

## COMMERCIAL EDUCATION.

131. **National commercial teachers' federation.** Proceedings . . . seventeenth annual convention, held at Chicago, Ill., December 29–31, 1913. Kansas City, Mo., The Federation. 220 p. 8°. (W. E. Ingersoll, secretary, Portland, Oregon.)

Contains: 1. F. M. Van Antwerp: [Commercial education] p. 12–16. 2. J. C. Walker: What can the business college do to meet better the requirements of the business world, p. 42–47. 3. W. H. Gilbert: What the business world demands of our graduates, p. 55–61. 4. C. A. Balcomb: A private secretary course for shorthand schools, p. 117–21. 5. W. A. Sheaffer: The teaching of commercial law in the high school, p. 125–30. 6. H. M. Rowe: Non-essentials in commercial work, p. 130–36. 7. R. A. Grant: Short commercial courses in high schools, p. 151–62. 8. T. E. Paulus: The long and short commercial course in the high school, p. 162–64. 9. William Bachrach: The two-year stenographic course of the Chicago high schools, p. 165–68.

## NURSE TRAINING.

132. **Hilliard, Amy M.** Inspection of nurse schools in New York state. American journal of nursing, 15: 282–85, January 1915.

From August 1, 1913, to July 31, 1914, 1,311 diplomas were issued to graduates of registered nurse training schools in New York state, an increase of 151 over the preceding year.

133. **Parsons, Sara E.** Encouraging signs in nursing education. American journal of nursing, 15: 274–76, January 1915.

Says that more college women are going into training schools for nursing every year. Nine universities have taken training of nurses as part of their work, and some of them confer a degree upon the graduates of the nursing school.

## CIVIC EDUCATION.

134. **National conference on universities and public service.** Universities and public service. Proceedings of the National conference on universities and public service . . . held under the auspices of Committee on practical training for public service of the American political science association, New York, May 12–13, 1914. Madison, Wis., Cantwell printing company, 1914. 289 p. 8°. (E. A. Fitzpatrick, Madison, Wis., executive secretary.)

Contains: 1. J. P. Mitchell: Universities and the public service, p. 19–21. 2. P. P. Claxton: A sound educational principle, p. 22–23. 3. R. J. Aley: The function of the university, p. 27–30.

4. Charles McCarthy: The upbuilding of administration. The greatest need of American democracy, p. 33–45. 5. P. P. Claxton: Public service as a career, p. 63–65. 6. B. B. Burritt: The occupations of college graduates, p. 85–88. 7. Public service activities of universities: a record of what is being done, p. 167–220. 8. E. E. Brown: The National university and the national life, p. 226–31. 9. John Dewey: Should universities give credit for work done in governmental bureaus and other agencies?—The educational principles involved, p. 249–54. 10. E. J. James: Professional training for important positions in the public service, p. 269–73.

135. **Fitzpatrick, Edward A.** How can we work the university graduate into municipal government? National municipal review, 4: 93–96, January 1915.

136. **Gill, Wilson Lindsley.** More efficient citizenship. Statement . . . in support of an amendment intended to be proposed by Mr. Owen to the bill making appropriations for the legislative, executive, and judicial expenses of the government for the fiscal year June 30, 1916. Washington, Government printing office, 1915. 11 p. 8°. (U. S. 63d Cong., 3d sess. Senate Doc. no. 662.)

Presented by Mr. Owen, December 22, 1914.—Ordered to be printed.

137 **Hall, G. Stanley.** Teaching the war. School and society, 1: 8–13, January 2, 1915.

The writer thinks "that war and its lessons can be taught without offense and that it is a pedagogic blunder which is sometimes worse than a crime to exclude a topic so quickening to intelligence, so rich in matter for which every youthful mind hungers, and which affords such an unparalleled opportunity to teach toleration and agreement to differ . . ."

## MILITARY TRAINING.

138. **Hibben, John Grier.** A phase of military preparedness. Princeton alumni weekly, 15: 336–37, January 13, 1915.

From the Nassau literary magazine, on subject of military training of college men.

139. **Kemsies, F.** Die militärische jugendvorbereitung. Archiv für pädagogik. I. teil. Die pädagogische praxis, 3: 9–14, November 1914.

"Literatur": p. 14.

Comments on the significance, for military preparedness, general education, and hygienic development of the young men, of the recent joint order by the Imperial German ministers of education, war, and internal affairs. *See* Militärische vorbereitung der jugend während des mobilen zustandes, in Zentralblatt für die gesamte unterrichtsverwaltung in Preussen, 10. heft, p. 629–33, October 1, 1914.

## EDUCATION OF INDIANS.

140. **Cloud, Henry R.** Education for the American Indian. Southern workman, 44: 12–16, January 1915.

Says: "Education that seeks to lead the Indians into outdoor vocational pursuits is most necessary."

## DEFECTIVE AND DELINQUENT CHILDREN.

141. **Eddins, A. W.** The school and the delinquent boy. Texas school journal, 32: 7–9, January 1915.

Mentions some ways in which our schools contribute to delinquency.

142. **Healy, William.** The individual delinquent; a text-book of diagnosis and prognosis for all concerned in understanding offenders. Boston, Little, Brown, and company, 1915. xvi, 830 p. illus. 4°.

143. **Schoff, Hannah Kent.** The wayward child; a study of the causes of crime. Indianapolis, The Bobbs-Merrill company [1915] [21], 274 p. 12°. (Childhood and youth series, ed. by M. V. O'Shea)

144. **Wilker, Karl.** Die pädagogik des anormalen menschen. Archiv für pädagogik. II. teil. Die pädagogische forschung, 3: 1–16, November 1914.

A historical summary of the development of the education of abnormal children, and a review of the standard literature regarding Education of cripples, the blind, deaf-mutes, the mentally defective, and epileptics.

## LIBRARIES AND READING.

145. **Cabot, Ella Lyman.** Children's reading as a help in training character. Journal of education, 81: 5–6, January 7, 1915.
Address before the Vermont state association.

146. **Koch, Theodore W.** The Imperial public library, St. Petersburg. First paper: The foundation. Library journal, 40: 5–23, January 1915. plates.
Mainly a digest of the centenary volume entitled "One hundred years of the Imperial public library," printed in Russian and edited by the present director of the library.

147. **Stahl, J. H.** Indiana young people's reading circle. Educator-journal, 15: 220–24, January 1915.

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148. Care of the health of boys in Girard college, Philadelphia, Pa. Washington, 1914. 20 p. plates. (Bulletin, 1914, no. 40)

149. Consolidation of rural schools and transportation of pupils at public expense; by A. C. Monahan. Washington, 1914. 108 p. plates. (Bulletin, 1914, no. 30)

150. County-unit organization for the administration of rural schools; by A. C. Monahan. Washington, 1914. 56 p. (Bulletin, 1914, no. 44)

151. Education for the home; by Benjamin R. Andrews. Part 1. Introductory survey, equipment for household arts. Washington, 1914. 53 p. plates. (Bulletin, 1914, no. 36)

152. School savings banks; by Mrs. Sara Louisa Oberholtzer. Washington, 1915. 34 p. (Bulletin, 1914, no. 46)

153. Statistics of state universities and state colleges for the year ended June 30, 1914. Washington, 1915. 19 p. (Bulletin, 1914, no. 50)

## NEW PERIODICALS.

American open air school journal. Vol. 1, no. 1, October 1914. Published monthly. American open air school association, Philadelphia, Pa. (Walter W. Roach, editor.)

Educational administration and supervision. Vol. 1, no. 1, January 1915. 10 numbers a year. Warwick & York, Baltimore, Md.

Normal school bulletin. Vol. 1, no. 1, September 1914. 10 numbers a year. Board of regents of normal schools, Madison, Wis.

Public schools. Vol. 1, no. 1, September 1914. 10 numbers a year. Denver, Colo.

School and society. Vol. 1, no. 1, January 2, 1915. Published weekly. The Science press, Garrison, N. Y. (J. McKeen Cattell, editor.)

Social hygiene. Vol. 1, no. 1, December 1914. Published quarterly. American social hygiene association, 105 West 40th street, New York, N. Y.

Southern educational news. Vol. 1, no. 1, January 1915. Published monthly, Dallas, Tex.

Teaching. Vol. 1, no. 1, October 1914. Published semi-monthly. Emporia, Kans.

Training school quarterly. Vol. 1, no. 1, April 1914. Greenville, N. C.

UNITED STATES BUREAU OF EDUCATION
BULLETIN, 1915, NO. 4 - - - - - - WHOLE NUMBER 628

# THE HEALTH OF SCHOOL CHILDREN

## CONTRIBUTIONS FROM AMERICAN MEDICAL JOURNALS
## JULY, 1913, TO JULY, 1914

Compiled by W. H. HECK
PROFESSOR OF EDUCATION, UNIVERSITY OF VIRGINIA

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# LETTER OF TRANSMITTAL.

Department of the Interior,
Bureau of Education,
*Washington, January 21, 1915.*

Sir: Our public-school system imposes upon school officers and teachers a heavy responsibility in the care for the health of the millions of children congregated in large groups in schoolhouses throughout the school hours of the school year and for suggestions and directions in regard to the care of the health of children out of school. In many schools principals must assume the responsibility for the health of pupils, both day and night, from the beginning to the end of the school year. To enable them to assume these responsibilities intelligently, school officers and teachers need all the assistance that can be gained from those who have given special study to the means of preserving and establishing the health of children. Much of the best of this material appears only in medical journals not usually accessible to school officers and teachers. I have therefore asked Dr. W. H. Heck, professor of education in the University of Virginia, to prepare for the Bureau of Education summaries of the best articles on this subject appearing in the standard medical journals each year. The accompanying manuscript contains summaries and selections made from journals of this kind in the year ending June 30, 1914. I recommend that the manuscript be published as a bulletin of the Bureau of Education.

Respectfully submitted.

P. P. Claxton,
*Commissioner.*

The Secretary of the Interior.

# THE HEALTH OF SCHOOL CHILDREN.

## INTRODUCTION.

W. H. HECK, PH. D., *Professor of Education, University of Virginia.*

Medical journals are not often accessible to students and practitioners of education, and therefore the wealth of material in these journals regarding the health of school children is mainly lost to the educational world. The present bulletin is the result of a desire to put this material at the disposal of superintendents, principals, professors, students in normal schools and colleges, and even medical inspectors who may not have access to all the journals here represented.

The purpose has been to select, from the many articles studied, paragraphs of those articles only that add to the literature of school hygiene new data, new points of view, or noteworthy statements of current opinion. Some of the selections are not strictly within the limits of school hygiene, but are suggestive for the general health propaganda of the schools. Although difficult technical discussions have been omitted, several technical terms had to be included; in fact, there is no reason why, for the main hygienic needs and pathological conditions of school children, the educational world should not learn and use the exact terms of medicine, rather than inexact popular terms. The number of articles selected on the different subjects corresponds fairly to the proportion of varied and useful material available, some phases of school hygiene having been discussed little or not at all in the medical journals. Of course, only the authors themselves are responsible for the opinions expressed by them; and the conflicting opinions of different articles are of special interest.

The files of journals and references in the Surgeon General's library at Washington have been searched for contributions. The period from July to July is probably the most convenient for an annual selection from medical literature. (One article here given is dated June 21, 1913.) The kindness of the publishers in allowing these selections to be reprinted is greatly appreciated.

No articles were chosen if they were known to have appeared also in educational journals, State health bulletins, or reports of two recent international congresses (Hygiene and Demography, Washington, 1912, and School Hygiene, Buffalo, 1913), as this material is widely accessible to students of education.

## MEDICAL INSPECTION OF INFANTS AND CHILDREN UNDER SCHOOL AGE.

DAVID FORSYTH, M. D., *Physician to the Evelina Hospital for Sick Children, London.*

*(From Pediatrics, October, 1913.)*

A significant fact bearing on the health of children, though hitherto hardly appreciated beside the more conspicuous facts relating to infant mortality, is now beginning to claim attention. I refer to the widespread physical deterioration that overtakes children during the first four or five years of life. This fact is well established by the medical inspection of elementary school children, the majority of whom prove to be physically unsound, most of their defects, moreover, being preventable. Clearly, therefore, it is to these earlier years, before schooling begins, that attention must be turned, if this deterioration is to be averted. The conditions can not be adequately met by postponing action until the children reach the minimum school age, by which time much suffering and not a little permanent damage will have been inflicted. What is needed is some form of medical supervision, together with facilities for remedial treatment, extending over the whole of the first lustrum.

But with this problem only now unfolding itself, little or nothing has been done as yet by way of a solution. True, there are infant consultations in many parts of the country, but these, owing their inception to the movement against infant mortality, are concerned only with infants under one year. Since, however, as will be seen below, it is not until the second year at earliest that the physical defects of the future school entrants show themselves in any number, preventive measures limited to the first year are unlikely to have much influence in warding off these later troubles. In a word, a gap, at present unbridged, stretches from the first year, when the activities of the infant consultation[1] come to an end, to the fifth, when the school medical inspection begins.

How, then, is the medical supervision of children under school age to be dealt with in present circumstances? Perhaps the most practical answer I can offer to this question is to submit for your consideration and discussion the plan adopted in this city of Westminster. Some two years ago the Westminster Health Society prepared a scheme for the medical supervision of these children, and in January, 1912, opened a medical inspection center for children under school age to serve the population in the north half of the city. The lines on which the center is conducted can be briefly summarized. With the cooperation of the public-health authorities, information is received of all births recorded under the notification of births act, and, with the help of a staff of health visitors, the society at once gets into touch with every family where a child is newly born.

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[1] "Consultation" is the name given to the centers where parents bring infants for medical advice.

In addition to these new-born infants, the center secures the attendance of older children up to 5 years, the same plan being followed as before. In this way the attempt has been made from the outset to include the whole of the under-school-age population of the district. The essence of the scheme, however, is to keep every child under medical supervision from the time of its birth until the end of its fifth year, and then to hand it over, sound and healthy, to the school authorities, together with the medical record of the material facts in its life for the information of the school doctor.

The results of the first year's work are probably of sufficient interest to warrant their inclusion in this paper. Altogether, 374 children have been examined, excluding reinspections. Of these, 131 were under 1 year of age, 77 under 2 years, 83, 50, and 33 under 3, 4, and 5 years, respectively. The outstanding feature of an analysis of the medical record cards is the rapid rise in the tide of disease with each year of life. For, while the large majority of the children in the first period are found to be healthy, only a small minority come through to their fifth year without at least one physical defect of some kind or another. This is most strikingly seen in cases of dental caries, a condition which is, probably, responsible for more ill health among children than any other. The increasing percentage of these cases in successive years is shown in the table below. It should further be added that, as a rule, the more advanced the age, the more extensive was the disease. A very similar rise is seen both with enlarged tonsils and with adenoids, while the proportion of these cases in urgent need of surgical operation increases yearly, indicating, of course, the aggravation of the condition when left untreated. With rickets, on the other hand, the incidence reaches a maximum in the second year, thereafter rapidly declining; this disease, therefore, so often the cause of lifelong deformity, has inflicted its damage long before school age.

Altogether, the 374 children presented 332 defects. In addition, the feeding in a large proportion of the cases in the earliest years required some modification, great or small, and in almost one-half the cases under 1 year old needed revision in one way or another. The table following, showing the percentage of children affected in each year, summarizes the incidence of the most important defects.

*Physical defects of 374 children examined, by ages.*

| | Under 1 year. | 1 year. | 2 years. | 3 years. | 4 years. |
|---|---|---|---|---|---|
| Teeth | | 2.6 | 18.1 | 34.0 | 63.6 |
| Tonsils | | 7.8 | 16.9 | 24.0 | 26.9 |
| Adenoids | 1.5 | 10.4 | 22.9 | 38.0 | 33.3 |
| Rickets | 13.0 | 25.9 | 9.6 | 8.0 | 3.0 |
| Diet modified | 49.6 | 22.8 | 6.0 | | |

The practical conclusion from the point of view of prevention and curative treatment hardly needs stating. Suffice it to say there is no reason to suppose that the children examined at the center differ materially from other children of their class, at any rate in urban areas, and it is highly probable that, as similar inspection centers are organized elsewhere, the results will be, in the main, similar to those in Westminster. In other words, large numbers of children, healthy in all respects at birth, become within five years the physically defective entrants whom the education authority is required, at no small cost, to restore, so far as possible, to their original state of health. Yet most of these cases are preventable, or, if taken in time, can be remedied more speedily, and therefore more cheaply, than if left until school age, by which time not a few will have received permanent damage—physical or mental. The problem of the defective child largely resolves itself into the problem of the under-school age child, and seems hardly likely to be solved by any scheme short of a national one insuring to all children regular medical supervision from birth to school age. And this, to be fully successful, must run side by side with educational measures for instructing the mothers themselves who, from ignorance far more than from willful neglect or even from indigence, are unable to safeguard their children's health.

## MEDICAL INSPECTION OF CHILDREN IN RURAL SCHOOLS.

William M. Jones, M. D., *Health Officer of Guilford County, N. C.*

(*Southern Medical Journal, March, 1914.*)

Guilford County contains 672 square miles, with more than 100 schools and 200 white teachers. The objects that we have worked for and are working for are two—education and prevention. Education of the masses, particularly the children, and the prevention of disease with the consequent conservation of life.

Education: By means of lectures and talks to the children, by pamphlets and bulletins, by press articles and notices, by illustrated lectures with lantern slides, dealing in an interesting and instructive way with such subjects as typhoid fever, malaria, the fly, the mosquito, smallpox, etc.; by clinics, such as hookworm demonstrations, and in every way possible we bring before the schools and community the gospel of good health.

Prevention: We have a large map of the county, on which is located every school. The doctors of the county report all dangerous diseases to the county board of health, giving the name and address of the parent and the school attended. As soon as the report is received, the teacher of that particular school is notified that the child has a dangerous disease, and that the other members of the family must be kept out of the school until further notice. A colored pin (different colors representing different diseases) is placed in the map at its proper location and is allowed to remain as long as there is danger of the disease being communicated.

Then for the school building and grounds per se. Upon visiting the school (and we endeavor to go to each one during the session), we record on a card the condition of the grounds, whether well drained or not. Next the privies, the number and condition. (Here, by way of parentheses, we will say that so far as the so-called sanitary privy is concerned, it is impractical with us just yet, and, in fact, is more insanitary than the common outhouse. All we strive for is prevention of infection from fecal matter, and privacy.) The water is next considered—its location, whether on the grounds or at a residence, and whether pump or bucket is used, and whether dispensed in a common or individual cup. The building is considered—the roof and chimney, heat and ventilation, and, when a structure of two stories, if a fire escape is handy or not.

Of all this a record is kept, and also on this card may be seen what recommendations were made the previous year, and whether these recommendations have been carried out.

We now enter the classroom, and refer to our card, whereon are recorded the names of those who were examined the previous year and found to be defective, and to whom individual cards were given, naming the special defect and advising parents or guardians to consult the family physician for treatment. The physician is asked to sign this card and mail it to the county board of health. This is a long journey for a little card to travel, and many are lost en route, so on our permanent card, whereon we have the record above mentioned *in re* the school, we also have the individual record of all defective children at the school. This is referred to and the children called up privately and asked if a card was not last year given them; if so, did they carry out the instructions, and if so, what was done. This is recorded on the card, and we then examine all new pupils and all who have not previously been examined. This examination includes the eyes, ears, nose, throat, teeth, skin, and special defects.

The eyes are to be examined first by the teacher, who keeps a record of all that are found defective, and when the examiner visits the school he examines only those that the teacher reports. This is to expedite the work.

The ears are examined by the teacher, who, if observant, soon notices any impairment without any set test. These are more fully examined by the examiner.

The nose and throat are examined by means of direct sunlight and wooden tongue depressor. We examine every child in the primary and intermediate grades, and those in the high school who wish it. The teeth are examined at the same time with the throat.

The skin is examined for impetigo contagiosa, scabies, etc. Also special defects, such as hookworm and anemia, are looked for. Those found defective are given a card, and a record is made, containing the name, address, and the particular defect.

By these means we hope to relieve to some extent the country boy and girl of a part of their handicap in the attainment not only of an education, but of a better and happier life.

## THE AGE AND SEASONAL INCIDENCE OF DISEASES OF CHILDREN.

CHARLES HERRMAN, M. D., *Chief of Department for Diseases of Children, Vanderbilt Clinic, New York.*

*(Archives of Pediatrics, October, 1913.)*

The patients were those who presented themselves for treatment from 1906 to 1910, inclusive, at the pediatric department of the Vanderbilt Clinic and the Lebanon Hospital dispensary, making a total of 32,000 new patients during these five years.

Comparing the percentages for the different ages of the total number of children in New York City under 13 years with the percentages of new cases at the different ages, we find the following:

*Percentage of child population and morbidity in New York City, by ages.*

| | Population. | Morbidity. |
|---|---|---|
| | *Per cent.* | *Per cent.* |
| Under 1 year of age | 9.2 | 20.6 |
| At 1, 2, 3, and 4 years | 8.3 | 9.5 |
| At 5, 6, 7, 8, and 9 years | 7.3 | 5.6 |
| At 10, 11, and 12 years | 7.0 | 4.3 |

The higher morbidity under 1 year is immediately apparent. It is still distinctly above the average under 5 years, and after that age it diminishes decidedly.

The relative percentages of male and female patients under 13 years show that the sexes are nearly equally divided. Of the total number, 52 per cent were male and 48 per cent female. The sexes therefore show an equal morbidity in each disease, and any marked discrepancy would indicate that one or the other sex is especially predisposed.

[The charts show, for 179 cases of chorea, the largest numbers in July and June and the smallest numbers in October, November, and September; for 170 cases of acute rheumatism the largest numbers in March, May, and July, and the smallest numbers in September, December, and August; for 378 cases of acute follicular tonsillitis the largest numbers in November, March, and May, and the smallest numbers in February and January. In regard to several contagious diseases the statistics for New York City as a whole during 1910 and 1911 were combined. The charts show, for 30,655 cases of diphtheria, the largest numbers in May, April, and March, and the smallest numbers in September, August, and October; for 34,943 cases of scarlet fever the largest numbers in March, April, and May, and the smallest numbers in September, August, and October; for 61,238 cases of measles the largest numbers in May, April, and March, and the smallest numbers in September, October, and August; for 12,294 cases of varicella (chicken pox) the largest numbers in May, March, and January, and the smallest numbers in August, September, and July; for 5,056 cases of pertussis (whooping cough) the largest numbers in March, May, and January, and the smallest numbers in October, November, and August.]

## SHALL WE CLOSE THE SCHOOLS DURING EPIDEMICS?

FRANCIS GEORGE CURTIS, M. D., Newton, Mass.

(*American Journal of Public Health, February, 1914.*)

One factor necessary in checking an outbreak quickly is a knowledge of the cases at the earliest possible moment, in order to eliminate possible foci of infection by removing and isolating infected or suspicious cases, and the whole matter resolves itself into the answer to the question whether the board can best do this when the schools are open and the children under supervision or when the schools are closed and the children scattered.

It seems to be almost a truism to say that the best work can be done under the first set of conditions.

Another point which I fear is often overlooked is that, other things being equal, the work of the board should be done with as little disturbance of normal conditions as is compatible with efficiency. In other words, if the outbreak can be checked as quickly and efficiently without closing the schools as by closing them, the former alternative should be adopted.

In Newton, in two instances lately where the outbreaks were due to missed cases that were in the school for some time before discovery, the first cases found were not children who sat near the infecting cases, nor were they in the same grade, but were their playmates and companions out of school.

Thus, in an outbreak of scarlet fever due to a missed case, the first case reported was a child in another grade in the school, but living at the end of the same street with and a playmate of the infecting case; the second case was a child in another school, but living next door to the infecting case; the third, fourth, and fifth cases, reported simultaneously, were a brother and sister of the infecting case and a playmate living across the street, none of them in the same grade. All of these cases, together with others, were traced to the infecting case, but of 11 cases due to this one, only 2 were in the same room at school.

More recently, in an outbreak of diphtheria, the cases were similarly infected, the majority being found among the children in other rooms than the one in which the infecting case sat, but all living near and playing with him out of school.

Of course no conclusions of any value can be drawn from so few instances; they are given for what they are worth, in the hope that further observations by others may confirm or disprove them, but so far as they go they seem to show that infection is not contracted in the schoolroom as frequently as is usually supposed.

If the schools are closed when an outbreak occurs, the children are turned loose from supervision; they mingle freely with one another in the streets, on playgrounds, and in each other's houses. They are having an extra vacation and enjoying themselves thoroughly and are unwilling to admit that they feel ill, lest they be kept at home and prevented from having a good time. For this reason they will not say they feel ill until the disease is well advanced, and they may be active sources of infection for some time before it is discovered that they are ill.

If the schools are kept open and the children continue in the classrooms as usual, they are under strict observation and examined daily by the school physician, suspicious and infected cases being sent home for observation or treatment.

In this way many children are sent home before they have had an opportunity to infect others, thus reducing the probability of spreading infection. Further than this, the attention of the parents is called to the fact that the child is feeling ill and he is brought under treatment earlier.

It seems, therefore, that keeping the schools open offers the best chance of safety for the scholars, both collectively and individually.

Instead of closing the schools and allowing the children to be scattered and removed from supervision, when an outbreak appears the schools should be kept open as usual and the children urged to attend. The school physician and nurse should be detailed to the school where the outbreak has appeared and instructed to examine every child daily, excluding such as appear ill or suspicious. This can be done with very little disturbance of the school work. A note must be sent to the parent stating that the child seems, or is, ill and must be seen by the family physician. Suspicious cases must be ordered to remain at home until further notice, and, if necessary, must be visited later in order to settle the diagnosis. Absentees must be rounded up and examined in order to find out why they have been kept at home. If they are ill, they must be isolated, and, if well, urged to return to school.

Such a method of dealing with an outbreak may seem to entail a large amount of work and require a specialization which the ordinary board of health can not carry out, and it does entail more work than closing the schools and waiting for the outbreak to stop itself, but in reality it is not difficult.

In a large city the necessary force is at hand and ready to start work; in smaller cities the number of cases to be handled is small and will probably be confined to one school, and the school physician can be detailed to the affected school during the outbreak, leaving the other schools in his district to be covered by one of his colleagues.

Even if extra help should be required, a condition which will rarely occur, the extra expense incurred will be more than offset by the shortening of the duration of the outbreak and the lack of disturbance to the schools.

When the schools are closed, certain expenses, such as salaries, etc., continue without any return, and there is also an added economic loss from the lessening of the time for instruction, so that the children in the affected school or schools are behind others in the same grade in the unaffected schools.

One practical difficulty which tends to lessen the value of keeping the schools open will be found in the fact that many children will be kept at home by their parents through ignorance of the facts or fear of infection. This can be met by a frank explanation of the reasons governing the action of the board in keeping the schools open. In the writer's experience it has often happened that after a frank explanation of this sort to a disturbed parent the result has been that the inquirer has sent his children back to school the next day, being convinced that they were fully as safe there as when they were kept out.

## THE PROPHYLAXIS OF MEASLES.

JOHN RUHRAH, M. D., *Professor of Diseases of Children, College of Physicians and Surgeons, Baltimore.*

(*New York Medical Journal, Apr. 25, 1914.*)

As measles is so easily spread, and as almost every child sooner or later has the disease, many parents, and in fact many physicians, pay little or no attention to its prevention. Much can be done to prevent the spread of measles, also to prevent fatalities. One of the greatest factors in lessening the mortality is to prevent children under 5 years of age from contracting it. In place of trying to shield young children, one often sees them purposely exposed to the disease in order that they may get it and have it over with. Many parents feel that if a child is eventually going to get measles, it might as well be allowed to have it early; but I have already pointed out the greater mortality of early childhood, which is an all-powerful incentive to prevent infection in the very young.

The prevention of the disease is perhaps not as difficult as we imagine. If a child is isolated promptly in what is real isolation, measles is not particularly liable to jump its boundary. The fault usually is that the isolation is not carried out in a satisfactory manner. In some of the newer hospitals where infectious diseases are treated, it has been found that measles may be isolated in box compartments in which the partitions do not reach the ceiling in the room, but in which a strict medical asepsis is carried out by conscientious nurses and physicians. With our shocking disregard of the so-called "minor" diseases in this country, and with little or no municipal provision for their care in properly constructed hospitals, the problem becomes one for the individual physician and the individual family. One reason for failure up to the present time is the fact that measles can not be properly isolated in apartments, especially where there is overcrowding; but while this is true as regards any individual family, much can be done by keeping out children of other families, and adults as well, on the principle that the fewer persons that come in contact with a contagious disease the fewer are liable to contract it.

The second point in the prophylaxis of measles is the closing of schools in the face of threatened epidemics. This protects the young child indirectly in that it lessens the danger of the older children in the family becoming infected and so bringing the disease back to the home to start a new focus of infection. In an epidemic in London, Raffle made a study of the effect of closing the schools, with the following results: In this epidemic 4,470 children were exposed to infection; of these, 2,180 were susceptible to the disease; of these, 853 were infected, 638 cases occurring during the time that the children were at school and 140 during the period of 14 days after which the school was closed; that is, 778 cases which might have been infected either at school or in home life. Thus, at the time the schools were closed, there were still more than 1,400 children who were susceptible to measles, but only 75 of these children actually contracted the disease. These figures show quite conclusively the enormous value of closing the schools in combating epidemics of measles.

In order to be of any service the isolation should be started early, and in order to do this it is necessary to make at least a tentative diagnosis. The problem of diagnosis will depend on whether the child is under the supervision of a physician or not. In schools and in institutions for children in which there is anything like adequate medical inspection, the early cases of measles may usually be determined by a number of diagnostic methods, if not with certainty at least with sufficient accuracy to isolate the child pending further developments.

The prophylaxis of measles will be seen to depend on the isolation of cases, particularly in preventing well children from associating with those who are ill until a diagnosis has been made, upon the closing of schools in the face of severe epidemics, and in the hospital treatment of the contagious diseases.

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## VACCINATION.[1]

GEORGE W. GAY, M. D.

(*Boston Medical and Surgical Journal, Apr. 2, 1914.*)

As the direct result of wise legislation, Massachusetts has been practically free from the dreadful scourge of smallpox for 40 years. The present generation knows little or nothing of it. Only those who remember the last severe epidemic in Boston in 1872–73, when nearly 4,000 were attacked and over 1,000 died, can begin to realize the terror, the distress, and the demoralization of the daily activities of the community in consequence of its presence. The outside world shunned us. Business fell off to a marked extent, and the attention of the people was focused chiefly upon the state of the epidemic.

This disease is preventable, but not curable. The chief factor in its prevention is vaccination. Its value has been incontestably demonstrated in all civilized countries for more than a hundred years. Time is wasted in arguments on this question in well-informed circles. Vaccination properly done and attended to is one of the safest surgical operations known to the medical profession. For nearly 10 years Massachusetts has prepared vaccine virus for distribution to its citizens free of expense. About half a million doses have been sent out and used with no known ill results. No purer or more reliable virus has ever been made anywhere.

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[1] General title of letter: "Antivaccination and the legislature."

No one claims that accidents never occur after vaccination, as they occasionally do after the most trivial injuries. Within eight years the writer has seen one death from the prick of a pin and one arm amputated for the scratch of a needle, yet pins and needles have not been given up, nor has any legislation been sought to prohibit their use as yet. The risks of our everyday life far exceed those from vaccination, while the benefits derived from the latter surpass our comprehension. The accidents are preventable. They are so rare that they are a negligible factor in the question.

Vaccination is favored by the medical profession all over the civilized world, by the sanitarians, health officers, and all others having to do with health problems, together with a very large proportion of the intelligent public everywhere. The alacrity with which the general public resorts to vaccination in times of danger shows their confidence in the measure. The evidence in its favor is so overwhelming that one is lost in amazement that its value can be questioned in these enlightened days. Is it reasonable to suppose for a moment that the great mass of intelligent people the world over is wrong on this matter and that the few persistent agitators are right? If the wonderful benefit of vaccination has not been proved, then nothing in the world is susceptible of proof.

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## CUTANEOUS AFFECTIONS OF CHILDHOOD.

ALFRED SCHALEK, M. D., *Professor of Dermatology, University of Nebraska.*

(*Journal of the American Medical Association, July 19, 1913.*)

Skin diseases, especially of the acute type, occur proportionally more frequently in children than in adults. The reason for this is not far to seek. Local and general conditions combine to reduce the normal resistance of the skin and to increase its susceptibility to pathologic changes. Exposures to injurious external agencies of mechanical and microbic nature are more common in childhood. Lack of proper hygiene influences the condition of the skin considerably. Keeping the skin clean and soft is the best prophylaxis against trouble, but unfortunately there are wrong conceptions about this matter even among intelligent people. Harmful extremes are seen repeatedly. There is no need of speaking of the fact that quite a number of eruptions are due directly to dirt. This acts on the skin mechanically and chemically, producing dermatitis and eczema and by harboring pus cocci, induces secondary infections such as impetigo and furunculosis. On the other hand the modern tendency to carry the use of water too far also does a great deal of mischief. Hebra, the Nestor of dermatology, used to say that he observed more skin troubles in people who were overactive bathers than in those who were too sparing with their ablutions. The too frequent washing of the skin removes the natural lubrication without giving the fat-producing glands a chance to accomplish their duties. The skin grows dry and irritable, especially when an inherited tendency in that direction is present, and easily becomes a prey to skin diseases. The matter of soaps is quite important in this connection. Inquiries about them will often clear up the obscure cause of some obstinate skin trouble. Only the purest and mildest soaps should be employed for the skin of children, which is very tender and sensitive. There is no call for admixtures of chemicals or drugs in them. If these are needed, they can be applied more properly and accurately in other ways. At times the infantile skin does not tolerate water and soap at all. Trying to remove the scales and crusts with still more scrubbing is responsible for a vicious circle resulting in severe and apparently incurable skin eruptions.

A great factor in the prevalence of skin diseases in older children is the public school. Childhood is the only age at which a great number of persons come into promiscuous and intimate contact during the greatest part of the time. It would be interesting and instructive to learn the percentage of skin diseases originating in the schoolroom. Disseminated here are syphilis, tuberculosis, scabies, trichophytosis, impetigo, the acute infectious exanthems, and others. Is this not sufficient reason that wherever medical inspection of schools is obligatory the examining physician should have more than a smattering knowledge of dermatology?

The instability of metabolism and elimination in childhood are frequently contributing factors toward cutaneous affections. Their direct connection with urticaria is well known. The association of indigestion of fat and sugar with acute inflammatory eczemas has recently been pointed out by Towle and Talbot. Whether we believe skin eruptions to be purely local or not, the regulation of gastro-intestinal functions is always an important item of our therapeutics.

The diet of older children needs careful supervision. The mistake of allowing them to partake indiscriminately of whatever food is served to adults is commonly made. When it is considered how often they are fed on sausage, cheese, pickles, sweets, and other indigestible food up to the limit, it seems remarkable that no more harm is done. The control over the eating is still more important when the children are affected with skin diseases, and at times a plain milk diet becomes imperative.

Disturbances of the nervous system have more to do with causing skin diseases than is generally appreciated. The connection of dentition and eczema is probably due to such a cause. Rest and sleep are essential for the cure of acute skin diseases in children. Too much handling and petting of the sick child makes it irritable and restless and interferes with the efficiency of the treatment. It is a common experience to see children recover in a hospital under the same treatment which, applied by the mother at home, has proved a failure.

Another feature which distinguishes the cutaneous affections of children is their deviation in symptomatology from that of adults. The lesions differ both in degree and in type. They assume a more acute and inflammatory character. To one who has not given a special study to the skin diseases of children, a diagnosis may become extremely difficult at times. The rule observed in adults, to depend for the diagnosis on some characteristic primary lesion, does not always hold good in children. It will be necessary not only to consider the existing cutaneous manifestations and the general symptoms, but also to study closely the developments and changes due to the peculiarities of childhood.

In regard to the therapeutics of cutaneous affections of childhood, two general rules might be laid down:

The first is the correction of any causative or aggravating complication. This point has already been partly referred to. A few words may be added in regard to the internal administration of drugs. It is better to do too little in this direction than too much. There are only a very few drugs that have any direct action on the skin. Those used for adults, such as arsenic, mercury, iodids, etc., must be used with great caution, partly on account of their general effects, partly because the child's skin is much more liable to drug dermatitis which might complicate or disguise the original trouble. The drugs usually needed are simple and indicated by the internal complications. An occasional purge with calomel or some other laxative, some iron tonic, and possibly a diuretic is usually all that is necessary. Antipyretics and opiates should be avoided as much as possible. The second general rule applies to the local management. It should be rather conservative than aggressive. The natural tendency of the skin is to recover to a normal condition if given a chance. Protection of the diseased skin is of the utmost importance. This means avoidance of irritations of whatever nature, exposure to air, water, heat or cold, scratching, the action of physiologic and pathologic secretions, from old and dried-up applications, etc. The number of the local applications which are necessary is limited. The tender skin of children does not tolerate and does not need any strong and stimulating action. The efficiency of the treatment does not depend so much on the knowledge of a great many different remedies as on the skill to recognize the indications and the proper method of application.

## GENERAL SYMPTOMS AND SIGNIFICANCE OF HOOKWORM DISEASE.[1]

C. M. FAUNTLEROY, *Passed Assistant Surgeon, United States Public Health Service.*

*(American Journal of Tropical Diseases and Preventive Medicine, April, 1914.)*

Inasmuch as the disease presents a very variable picture according to the severity of the infection, the length of time the infection has existed, and the amount of resistance shown by the patient toward the infection, it is manifestly impracticable to designate a list of symptoms as being characteristic of all cases of hookworm disease. When the disease is acquired prior to puberty, development, both physical and mental, is retarded, such persons having the appearance of being considerably younger than they really are, because of the evident lack of development. Anemia, more or less marked, is a prominent symptom, and such cases usually show the circulatory and respiratory symptoms of anemia. An apathy and lack of energy are very commonly associated with hookworm disease, so that in some sections of the country the condition has received the name of "lazy disease." Many persons who harbor hookworm infection continue to attend to their daily affairs, and to all appearances are enjoying good health. However, if a careful inquiry be made as to the general health of such persons extending over a period of several months, it will be found that in the majority of cases there will be a history of a considerable amount of minor illnesses and more or less physical incapacity. In women sterility and delayed menstruation are commonly met with. Many persons complain of epigastric discomfort or pain. There may be anorexia and a craving for unusual articles of food. Constipation is exceedingly common, but diarrhea occurs once in a while.

"Ground itch" is the local lesion usually found upon the feet or hands, very commonly between and beneath the toes, through which the parasites enter the body. There is an eruption of vesicles, followed by pustules and a sticky exudate. The adjacent skin becomes red and swollen. The dermatitis usually subsides within 12 days; the vesicles and pustules become dry and are exfoliated.

A person who harbors hookworm infection may possibly remain more or less infected for a period of 10 or 12 years, excluding any reinfection. Hookworm disease is responsible, directly and indirectly, for an enormous number of deaths, illnesses, and incapacity among the poorer classes in heavily infected areas. It is probable that a large number of the deaths certified as due to anemia, dropsy, and malaria, in some hookworm infected areas, are in reality due to unrecognized hookworm disease.

In the United States, in the South Atlantic and Gulf States, containing about 20,000,000 people, the degree of infection is very heavy, and the general efficiency of the laboring classes is markedly impaired. It is estimated that in this section of our country the loss of money by reason of the direct and indirect effects of hookworm disease will reach several millions of dollars per annum, aside from the loss to the country in the degenerating effects produced by the disease, and the consequent delayed development of the various industries throughout this section of the country. Stiles has shown that more than 12 per cent of cotton-mill employees in the Southern States are infected. The loss to this industry alone must be great, because of the incapacitating effects of the disease. In the mines of California the general efficiency of the workers is noticeably impaired, many of the men being compelled to discontinue their work because of the disease. A loss of 20 per cent in efficiency in those infected is considered a conservative estimate. Nearly all of the gold mines of California contain the infection, as well as a goodly number of the agricultural laborers of the State, so that this one State must suffer a great loss in various ways by reason of the disease.

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[1] General title of article: "Ankylostomiasis (or Hookworm Disease)".

In the infected communities it is common to find whole families showing a marked degree of illiteracy, which is traceable to the disabling effects of the disease, and in many instances it is learned that for several generations none of these people have so much as entered a school. A proper appreciation by the general public of the incalculable importance of this disease in all its manifold bearings upon the welfare of the Nation is certainly urgently needed. Hookworm disease bequeaths a pernicious legacy to the infected communities, its work being done in a subtle, insidious manner, weakening the race generation after generation, always tending to produce a condition of physical, intellectual, economic, and moral degeneracy.

The most essential factor in spread of the disease is the pollution of the soil by the fecal discharges of infected persons. The prevention of soil pollution by hookworm-infected persons means eradication of the disease, and a marked improvement in the general health and prosperity of the community. Inasmuch as there is an abundance of indisputable evidence to show that this disease and many other parasitic diseases are spread broadcast over the country by soil pollution, causing many deaths, much sickness, poverty, and expense in the affected communities, there should be strict compulsory laws prohibiting pollution, and any failure to comply therewith should be punishable by heavy fines and imprisonment. In many rural districts the sanitary condition which obtains with respect to the disposal of human excreta is, from a sanitary standpoint, not one whit better than that of the dumb animals in the community. The deposition of all human excerta in sanitary privies, and the proper disposal thereof, is the sanitary reform most urgently needed in the infected districts. All fresh human fecal material should be regarded as a virulent poison and disposed of accordingly.

The hookworm ova are discharged mixed with the feces of the infected person, many thousand escaping from a single person in the course of 24 hours, as a rule. Under favorable conditions the eggs develop into worms, some of which are almost certain to find their way back to the human host. This process goes on and on, from person to person, until a widespread infection results.

## RULES FOR PREVENTING TYPHOID FEVER.

EDWIN O. JORDAN, *Professor of Hygiene and Bacteriology, University of Chicago.*

*(Journal of the American Medical Association, June 6, 1914.)*

*For the individual:*

1. Keep away from all known or suspected cases of typhoid.
2. Wash hands thoroughly before meals. Do not use "roller towels."
3. Use drinking water only from sources known to be pure, or if this is not possible, use water that has been purified by municipal filtration or by hypochlorite treatment or by boiling in the household.
4. Avoid bathing in polluted water.
5. Use pasteurized or boiled, instead of raw, milk.
6. Select and clean with the greatest care vegetables and berries that are to be eaten raw.
7. Avoid eating "fat" raw oysters and, in general, oysters and other shellfish whose origin is not known.
8. Be vaccinated against typhoid in all cases in which any special exposure is known or feared.

*For the community:*

1. Insist on the hearty cooperation of all persons with an efficient health officer.
2. Require notification and a reasonable degree of isolation of every known or suspected typhoid case.
3. Exercise strict control over the disinfection of known typhoid excreta.
4. Insist on pure or purified water supplies.
5. Require pasteurization of milk supplies.
6. Regard all human excreta as possibly dangerous and control their disposition in such a way as to prevent contamination of food or drink.

## CARDIAC DISEASE IN CHILDHOOD, WITH SPECIAL REFERENCE TO PROGNOSIS.

CHARLES HUNTER DUNN, M. D., Boston.

(*American Journal of Diseases of Children, August, 1913.*)

In 1906 I reported the results of an investigation of certain clinical aspects of rheumatic fever in childhood, which was based on a series of 300 consecutive patients admitted to the wards of the Children's Hospital. Of these 300 patients, 209 were discharged from the hospital with signs of organic valvular disease of the heart. The after history of these cases appeared to me to be a point of great interest, with a practical value bearing directly on the question of prognosis, and on certain aspects of treatment. I determined at the time to keep in communication, as far as possible, with all of these discharged patients, and at the same time the scope of the investigation was extended beyond the limit of cardiac disease of rheumatic origin, by including all other patients of cardiac disease admitted to the hospital during the period from which the original series was taken. Cases of patients who subsequently died from intercurrent infection were thrown out.

One of the features of greatest interest in such an investigation is the amount of disability carried into adult life, or at least young adult life, by these patients. It was therefore necessary to follow the after history of these patients for a period sufficiently long to afford evidence on this point. The period in which the cardiac patients of this series were admitted to the hospital was that of a number of years previous to the summer of 1903. I resolved to follow the cases discharged from the hospital until all of them should have entered at least young adult life, taking the age of 14 years as the termination of childhood. All of these patients have now passed this limit, the youngest survivor having reached the age of 15 years.

### ETIOLOGY.

The series of cases included in this investigation numbers 304 cases of cardiac disease. It throws a certain amount of light on the relative frequency of occurrence of the various etiologic factors.

*Causes of cardiac disease in 304 cases.*

| Causes. | Cases. | Per cent. |
|---|---|---|
| Rheumatic fever | 264 | 87 |
| Congenital lesions | 21 | 7 |
| Some recognized infection other than rheumatic fever | 9 | 3 |
| Unknown etiology | 10 | 3 |

[Then follows a discussion of the specific cardiac diseases.]

## CONCLUSIONS.

1. Rheumatic fever is very much the commonest cause of cardiac disease in childhood.

2. Cases with acute rheumatic infection localized in the heart are commoner than cases suffering from chronic endocarditis.

3. Cardiac symptoms are due to two causes: First, acute infection localized in the heart: second, broken cardiac compensation. Of these two causes the first is the commoner.

4. The liability of children to recurrent attacks of acute rheumatic infection, in any of which the heart may be involved, is very great.

5. The immediate mortality of rheumatic cardiac disease is about 20 per cent.

6. The subsequent mortality of patients with endocarditis of rheumatic origin, followed for at least 10 years, is about 50 per cent.

7. The final mortality of rheumatic fever, followed for at least 10 years, is 60 per cent.

8. The mortality is seen chiefly during childhood. The mortality after young adult life is reached falls to only 7 per cent.

9. The cause of death is heart failure. The cause of the heart failure may be either acute cardiac infection or broken compensation. In childhood the former cause is far the more common. After adult life is reached, the latter cause is more common.

10. The particular valvular lesion present has little or no relation either to the mortality or to the amount of disability in adult life, except that aortic disease appears to be a particularly fatal lesion in childhood.

11. The causes of the great mortality of rheumatic fever in children are, first, their greater liability to this infection; second, their greater liability to recurrent attacks; third, their greater liability to cardiac involvement.

12. Patients who escape the dangers of childhood and who enter adult life are apt to show a remarkable freedom from disability. The majority of such patients can lead normal active lives.

13. The probable cause of this freedom from disability lies in the fact that the cardiac damage occurs during the period of growth, and during this period a particularly perfect adaptation can take place between the heart and the patient, which enables the heart to meet the demands made upon it. This adaptation is more perfect than can be attained in the adult.

14. The earlier in life the cardiac lesion is acquired, the better is apt to be the result in adult life, as concerns ability to lead an active, normal existence, provided that the patient escapes the dangers of childhood.

15. Treatment should be directed toward favoring the adaptation of child and heart. While guarding against overstrain we must avoid too great limiting of the normal activities of childhood.

16. In congenital cardiac disease open ductus arteriosus is a favorable lesion.

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## SYMPTOMS OF RHEUMATISM IN CHILDHOOD.

H. P. DAWSON, M. D., *Pediatrist to St. Margaret's Hospital, Montgomery, Ala.*

(*Southern Medical Journal, April, 1914.*)

Rheumatism is one of the many diseases that illustrate the considerable difference which may exist between the manifestations of one and the same disease—when it occurs in an adult and when it occurs in a child. Rheumatic inflammation of the fibrous tissues is a common affection in early life. In childhood, indeed, there appears to be a peculiar tendency to rheumatism, and in children the disease may assume many different phases.

The conception of rheumatism as essentially a joint disease is based on its occurrence in adolescent and adult life. The wider and almost certainly more accurate conception of rheumatism as a general disease, probably of infective origin, is based chiefly on its manifestation in childhood.

The symptoms of rheumatism in childhood differ from those in adults chiefly in the much slighter character of the joint manifestations and in the much greater prominence and frequency of the heart affections.

Clinical experience shows that pains referred to the limbs, as distinguished from the joints, may be just as significant of rheumatism in children as swollen, red, and tender joints. This is proved by the fact that it is quite common for children with only such vague "pains in the limbs," for example, in the calf or thigh, to show other symptoms of "acute rheumatism," such as endocarditis and pericarditis or subcutaneous nodules; moreover, definite swelling and tenderness of the joints may immediately precede or follow these pains in the limbs. The practical importance of recognizing the significance of these slight pains in the limbs of children—"growing pains" as they are too often called—can hardly be overrated.

In connection with the joint symptom I may mention that Sir Thomas Barlow has called attention to the frequency of affection of the hip joint in the rheumatism of childhood. Rheumatism, in some instances, remains limited to one joint for several days, and when it affects the hip joint may easily suggest commencing tuberculous disease or may lead to stranger errors, owing to the very indefinite localization of pain in children. About one year ago I was called in consultation to see a supposed case of intussusception, which a few days later was followed by definite symptoms of rheumatism elsewhere.

Another symptom which is of importance because it may be the earliest manifestation of rheumatism in a child is stiff neck. This may seem a trivial affection, but, like the vague pains and stiffness in the limbs, it may be followed or accompanied by severe cardiac rheumatism.

The frequency of cardiac affections is one of the most characteristic features of rheumatism in childhood. Sir George Still reports, in 170 as far as possible consecutive cases with rheumatic manifestations, 128 had cardiac bruits, which in 93 cases were certainly due to endocarditis.

But endocarditis and pericarditis are by no means the only results of cardiac rheumatism, and in children, probably to a greater extent than in adults, cardiac dilatation is a frequent result of rheumatism, an important point to which Dr. Lees has specially drawn attention.

It may not be out of place to mention here the wasting which so often accompanies cardiac rheumatism in childhood. I have had two cases brought to me with this only complaint, the mother not suspecting rheumatism or cardiac disease. However, on inquiry there was a history of vague pains in the limbs for many months past.

In England great stress is laid upon the rheumatic nodule as a manifestation of rheumatism in children. These nodules may occur also with chorea without other clinical evidence of rheumatism, a point which is worthy of note in considering the relation of chorea to rheumatism.

Amongst the symptoms of rheumatism in children, as in adults, must be reckoned sore throat. Tonsillitis so frequently occurs just before the onset of rheumatic pains in children that it is difficult to escape the conclusion that it bears some direct relation, possibly as medium of infection, to rheumatism. Its occurrence also is sometimes followed by an exacerbation of rheumatism.

There are certain minor symptoms, which, although not usually described as symptoms of rheumatism, seem to have a very close connection therewith, for example, "pain in the stomach," which is usually referred to the epigastrium. Another symptom which I have noticed is pain in the side, usually in the lower part of one axilla. A common trouble in rheumatic children and in the children of rheumatic parents is headache. The rheumatic child is par excellence the nervous child.

The frequency of rheumatism is also seen in association with "night terror," somnambulism, habit spasm, and lienteric diarrhea.

The importance of early recognition of rheumatism in children will be realized by those who are familiar with the frequency of heart disease in the rheumatic child. I suppose there are few more pitiful conditions than that of the child dying with cardiac rheumatism, and it is by paying attention to "the day of small things," the apparently trivial aches and pains, and the various associations which make up the picture of rheumatism in childhood, that we may hope, in some cases at least, to prevent these terrible results which are too often seen from neglected rheumatism in children.

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## A STUDY OF THE CHILD IN THE TUBERCULOUS MILIEU.

MAURICE FISHBERG, M. D., *Physician to the United Hebrew Charities, New York.*

(*Archives of Pediatrics, February and March, 1914.*)

This investigation was made of all the children of tuberculous applicants for relief to the United Hebrew Charities in New York City during the three months, March, April, and May, 1913, taken as they came, without any selection. After ascertaining that either the father or mother was tuberculous, or both of the parents, we proceeded to investigate the social, economic, and hygienic conditions of the family, and all the children under 15 years of age were examined medically and the cutaneous tuberculin test applied. About four months later each child was reexamined, and those who reacted negatively to the first tuberculin test were again tested according to the Von Pirquet method.

The children in 217 families, in which the father, mother, or both parents were found tuberculous, were investigated. They were found living under conditions greatly favoring the dissemination of the disease. Of 274 consumptives found among these people, only 112 slept in a separate room, and 136 slept in beds by themselves. The rest shared their rooms, or beds, or both, with other persons. Their economic condition can be summed up by saying that they were at the end of their resources, otherwise they would not have applied for relief. Inasmuch as these children were burdened by both a deleterious environment and a tainted heredity, they should offer splendid material for the study of the effects of the tuberculous milieu on children.

Of the 1,129 persons comprised in this group of families, 792 were under 15 years of age. Nearly all of these children were reared on breast milk, only 5.5 per cent having been brought up on artificial feeding. The proportion reacting to tuberculin was not found to have been influenced by the manner of feeding during infancy. Some mothers suffering from active tuberculosis were found suckling their infants, and the latter apparently thrived as well as others of their class; many, however, infected them with active tuberculosis.

The weight of the infants was fairly normal, but the children over 4 years of age were deplorably short in weight when compared with others of their class. At the age of 8 they lacked 3.67 kilograms, and at 14 even 7 kilograms of the average. During the six months they were kept under observation, one-half remained stationary in weight, 40 per cent had lost and 10 per cent had gained in weight.

The form and shape of the chest was normal in 62.5 per cent of the children; 27.5 per cent had flat chests; and 10 per cent rachitic chests. The large proportion of flat chests is not necessarily an indication of the habitus phthisicus, because Jewish people are known for their flat chests.

In 8 per cent of the children enlarged superficial thoracic veins were found. In children in whom a diagnosis of tuberculosis was made 37.5 per cent showed these enlarged veins and three-fourths were unilateral. Of the children showing signs of latent tuberculosis, 25 per cent had enlarged thoracic veins.

The cervical glands were swollen in 67.8 per cent of the children; swollen glands in the axilla, groin, etc., were exceedingly rare. Only one child was found with enlarged supraclavicular glands, and it had other symptoms and signs of tuberculosis.

Hyperplastic conditions of the nose, throat, and pharynx, such as enlarged tonsils, adenoids, chronic rhinitis, etc., were found in 58.6 per cent of the children. Scrofula was rather infrequent. Our investigation tends to confirm the opinion that these hyperplastic conditions, as well as scrofula, have nothing in common with tuberculosis. The external stigmata of tuberculosis, such as scrofuloderma, tuberculides, phlyctenula, glandular blepharitis and conjunctivitis, keratitis, etc., were exceedingly rare among these children.

The cutaneous tuberculin test, applied twice and three times to those who reacted negatively to the first application, was found positive in 7 per cent of infants between 1 and 6 months of age. Between 6 months and 1 year of age 21 per cent of the infants reacted positively. The percentage of positive reactions keeps on increasing with advancing age, and at 14 years 83.79 per cent were found infected with tuberculosis. When compared with the results obtained by others who reported the application of the tuberculin test to a large number of children, it appears that the tuberculous milieu has not materially increased the number infected with tuberculosis among the children over 6 years of age. In other cities it was found that about the same percentage, or even more, react positively. But among the infants under 4 years of age the proportion infected is considerably higher among those who live in a tuberculous milieu. Comparing our results with those obtained in rural districts, where but few consumptives come in contact with the children, we find that children in cities, especially those who live with tuberculous parents, are at a great disadvantage, and that infection is inevitable among them.

Among the 692 children, 65 were found to be suffering from active tuberculosis. Of these, 13 had tuberculosis of the bones and joints, 4 Pott's disease, 2 spina ventosa, and 1 tuberculosis of the glands. With active pulmonary tuberculosis 19 children were found, and 25 with tracheo-bronchial adenitis.

The mortality of children under 14 among these families was rather high. Of 188 children under 6 that died, 30 succumbed to meningitis; i. e., 16 per cent of all the deaths of children under 6 years of age were due to meningitis, which is enormous when compared with the 2 per cent of deaths due to this cause among the general population. While only 17, or 7.3 per cent, of all the deaths were said by the mothers to have been due to pulmonary tuberculosis, it must be borne in mind that in 79 cases the parents stated that the deaths were due to unknown causes. Many of these were undoubtedly due to tuberculosis, which, during infancy, is not always diagnosed.

The opinion entertained by many authors that infants under 1 year of age when infected by tuberculosis do not survive the disease is only partly supported by our investigation. We have seen among these children many who were undoubtedly infected during the first few months of their existence, yet they survived and even present a healthy appearance. However, it appears from our observations of the child in tuberculous milieu that the prognosis depends largely on the age at which infection takes place, and that the danger of tuberculosis as a fatal disease among children is in an inverse ratio to the age at which they are infected. Those infected during the first two years of life are in grave danger of succumbing to hematogenous tuberculosis, notably tuberculous meningitis. Children over 5 years of age when infected show only signs of latent tuberculosis, and chronic phthisis is rather rare among them.

Massive infection, such as we found among these children, is the most potent factor in the propagation of tuberculosis. Prophylactic measures taken against the spread of tuberculosis to be effective must be directed with a view to protection of infants against any contact with tuberculous persons and older children against massive infections such as have been met with in the families we found living in a tuberculous milieu.

## TUBERCULOUS BRONCHIAL GLANDS IN CHILDREN.[1]

JOHN B. HAWES, 2D, M. D., Boston, Mass.

(*Interstate Medical Journal, March, 1914.*)

Tuberculosis in childhood is primarily a disease of the lymphatic system. By the time the lung itself is involved, the process is a well-advanced one, and one that offers no difficulty in diagnosis. In this article, therefore, I shall confine my remarks to the diagnosis of the disease in its early stages, when the bronchial lymph glands are affected and little or none of the lung itself is involved. Here, as in adults, the importance of constitutional signs and symptoms can not be given too much emphasis. Only in the rarest of instances, even with X-ray evidence, is it possible to decide definitely from the examination of the chest alone that tuberculous bronchial glands are present, and, of still greater importance, that they are *the cause of the symptoms.*

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[1] General title of article: "Intrathoracic Tuberculosis in Infancy and Childhood, including Bronchial Gland Tuberculosis."

These constitutional signs and symptoms above referred to may be as follows: (A) Loss of weight, or, of greater importance, failure to gain weight; (B) malnutrition, despite what seems to be adequate and proper nourishment; (C) continuous fever, or a constantly subnormal temperature associated with a high pulse; (D) anemia; (E) debility, languor, undue fatigue, irritability, loss of appetite, or a capricious appetite.

It is true that any or all of these symptoms or conditions may be due to causes other than tuberculosis. These should be carefully borne in mind and eliminated if possible. Such conditions, however, as rickets, chorea, endocarditis, improper feeding, etc., if present, are usually strikingly evident. When these symptoms exist without apparent cause, even if the signs in the lungs are slight or absent, it is safe to make at least a provisional diagnosis of a tuberculous infection as the cause of symptoms. When, in addition to these, there are present certain signs and symptoms referred to the lungs, the diagnosis is conclusive. Such signs and symptoms referred to the lungs may be:

(A) Cough, usually dry and throaty, often of brassy quality and paroxysmal in nature, sometimes closely resembling whooping cough. There is usually no sputum and no obvious cause for such a cough, such as enlarged tonsils, etc.

(B) Impairment of resonance at the level of the second intercostal space in front and in the interscapular region behind.

(C) Bronchial breathing and bronchial whispered voice heard on auscultation over the vertebræ below normal limits.

(D) Signs of intrathoracic pressure, such as enlarged veins on the chest, unequal pupils, hoarseness, paroxysmal "brassy" cough, and a peculiar strident or sibilant quality to the breath sounds.

(E) Enlarged tuberculous glands in the neck or elsewhere, suggesting the possibility of similar glands at the root of the lung.

It is in the case of children that the tuberculin test finds its greatest field of usefulness. The Von Pirquet, or cutaneous, test is by far the best one to employ. The technique of this is already well known, and is so simple as to require no description. In this test a negative reaction is of more value than a positive one. A negative skin tuberculin reaction in a child of 10 years or under, carefully performed, is as good evidence as can be obtained that tuberculosis is not the cause of the child's condition. This statement of course assumes that none of these conditions, such as advanced tuberculosis in the lungs or elsewhere, a recent attack of measles or other acute disease, which have been known to cause a negative reaction, is present.

A positive skin tuberculin reaction, while of great importance, by itself is not enough on which to base a diagnosis of clinical tuberculosis. It simply means that somewhere in the child's body there is a tuberculous focus. If, in addition to a positive reaction, constitutional signs and symptoms are present, even without any of those referred to the lungs as mentioned above, a definite diagnosis of tuberculosis, requiring prompt and aggressive treatment, is justified.

The X ray, like the tuberculin test, in my opinion is of far greater value in children than in adults. While it is only in comparatively advanced cases that tuberculous bronchial glands are of such size as to cause marked dullness or other very striking signs in the chest, a careful X-ray examination, made and interpreted by an expert, will show such glands long before they have attained great size, although quite capable of producing marked constitutional symptoms. It should also be borne in mind that the X ray after all shows only shadows and gives absolutely no indication as to whether any given process is old or recent, active or inactive. X-ray evidence alone never justifies a definite diagnosis of what we know as clinical tuberculosis.

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## RESULTS OF JOINT TUBERCULOSIS IN A SERIES OF 200 CASES UNDER OBSERVATION FOR FIVE OR MORE YEARS.

FRANK D. DICKSON, M. D., and DE FOREST P. WILLARD, M. D., *Instructors in Orthopedic Surgery, University of Pennsylvania.*

(*Pennsylvania Medical Journal, June, 1914.*)

Our statistics are based on a series of 200 cases collected from the records of the orthopedic department of the University of Pennsylvania and the Orthopedic Hospital, from the services of Dr. Davis and the late Dr. Willard. Of these cases 71 were tuberculosis of the spine, 82 of the hip, 33 of the knee, 14 of the other joints. The two points which were considered essential in the collection of the series were that the cases should have been under observation for five years from the time that treatment was started and that the diagnosis of joint tuberculosis was well proved.

The treatment throughout has been distinctly conservative and was practically identical in the two services. In the main this falls into three classes—treatment in bed, treatment by plaster cast, and treatment by brace. By bed treatment we mean rest in bed with absolute fixation of the diseased joint.

*General results of treatment.*

| | Number of cases. | Per cent. |
|---|---|---|
| Quiescent | 142 | 71 |
| Under treatment | 45 | 22½ |
| Deaths | 13 | 6½ |
| Total | 200 | 100 |

## CONCLUSIONS.

1. The results of the present combination of conservative and hygienic treatments may be considered as satisfactory.
2. There can be no doubt that the early institution of treatment has a marked beneficial effect on prognosis, both as to deformity and as to ultimate recovery.
3. Our results would indicate that the earlier in life the onset the more favorable is the prognosis.
4. In the acute stages treatment in bed is the most effective.
5. Prolonged sinus formation with mixed infection markedly favors the general distribution of the tuberculous process from the localized focus and increases the danger of a fatal termination.
6. The strict enforcement of hygienic measures during the whole course of the disease and the supervision of the patient after leaving the hospital are essential points in the treatment of joint tuberculosis.

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## THE STATE CARE OF CRIPPLED CHILDREN.

WALLACE BLANCHARD, M. D., *Assistant Clinical Professor in Surgery (Orthopedic), Rush Medical College, Chicago.*

(*Chicago Medical Recorder, March, 1914.*)

It has been declared in the legislatures of the three States of New York, Minnesota, and Nebraska that it costs much less to correct the deformity of a destitute crippled child and make it a future self-supporting and upbuilding factor in the State than to leave it to be a public beggar, or to remain in some other way a burden upon the people of the State for its natural lifetime. Acting upon this policy, which it may be assumed is well proven, the above-named States have established State orthopedic hospitals, with orthopedic surgeons of good reputations in charge.

Modern methods of orthopedic surgery are reducing the helpless and bedridden cripples to an exceedingly small proportion.

Nothing gives more joy to a bedridden, crippled child than the prospect of standing alone and becoming able to walk, with a further prospect of being able to do its share of work in the world. The best and only time to perfectly correct most deformities is in childhood.

A large share of the severe deformities are the inheritance of poverty, and, if corrected at all, the work must be done in charity hospitals, either sustained by private charity or by municipal and State appropriations. For over 20 years the Home for Destitute Crippled Children, Chicago, has been doing a great work in restoring the deformed to normal symmetry, and that usually stands for future ability to earn a living. The annual report for 1913 showed 811 house cases and 1,559 dispensary out-patients treated.

About one-third of all the deformities corrected are tubercular, one-third congenital or acquired paralytic, and one-third rachitic.

The rachitic deformities, consisting usually of knock-knee, bowlegs, and anterior bent tibias, are expeditiously corrected by the modern method of rapid and bloodless osteoclasis. No time and expense are lost upon antiseptic dressing and precautions. The bloodless corrections are made in a Grattan osteoclast in eight seconds. The parts are held in plaster of Paris for five weeks, and in six weeks the patient is walking on symmetric legs and is ready for discharge.

Unfortunately, the other classes of deformities require more prolonged treatments. The tubercular joints frequently require from one to three or four years of treatment. It is hoped that the Albee operation may shorten the course of treatment necessary for Pott's disease of the spine.

The congenital clubfoot can be quickly corrected by tenotomy and forcible straightening, but requires from four months to a year of close observation to prevent a relapse.

The paralytic clubfoot deformities, whether corrected by tenotomies, astragalectomy, or tendon transplantation, require prolonged care and attention.

It is hoped that the Abbott method of treating scoliosis may shorten the period of treatment and give improved results.

The congenital hip dislocations require eight months in plaster of Paris to get good results. We are doing Prof. Lorenz's new manipulative replacement, which is a vast improvement upon the forceful method he employed when he came to Chicago 12 years ago. It will be remembered that when Prof. Lorenz came to this country he would not attempt to reduce a congenital hip in a child over 5 years of age. By the more improved modern methods we frequently succeed in getting good replacements in children up to 8 and even 10 years of age.

We frequently receive paralytic children with a history of having lain helpless on the bed for several years. * * * Frequently after a month's treatment the child will be found walking on a pair of crutches around the ward. After a time braces are applied in place of plaster. Thus a bedridden case becomes an ambulatory patient, with a hope of still further improvement.

An improvement in the mentality of the child immediately follows the correction of its deformities. Increased confidence and force of character can always be seen in the faces of the second pictures of the cases.

To give little cripples straight and symmetric bodies and limbs, so that they may enter life's work with a good chance of becoming self-supporting and self-respecting upbuilders in the community, is not only a charity, but has been shown by the experience of at least three States to be a good financial investment for the State. Certainly this great work should not be left entirely as an over-heavy financial load to be carried by generous and self-sacrificing philanthropists.

## EARLY HISTORY OF THE CARE AND TREATMENT OF CRIPPLES.

DOUGLAS C. MCMURTRIE, New York.

*(Bulletin of the Johns Hopkins Hospital, February, 1914.)*

The first glimmer of hope for the welfare of the cripple began to appear in the eighteenth century, though the progress in this direction was very slow. The first measures did not in a strict sense mark the beginnings of care for cripples, but they operated to the ultimate advantages of those who, by reason of their infirmity, were cast upon the pity of their fellow men. The actuating motive of provision in many cases, however, was utilitarian in character. One object was that all cripples might be confined, so that they should not annoy the community bv their deformed appearance.

Some of the many monasteries which had not been utilized since the time of the Reformation were thrown open and converted into orphan asylums, madhouses, or penitentiaries. In the establishment of the various institutions the cripple was frequently considered.

Those handicapped by deformity were best provided for at a hospital for wretched and pauper invalids established at Pforgheim in 1722 by Count Luitgard, of Baden. This was later transformed by Count Charles Frederic, of Baden, into an orphan asylum, but made especial provision for young and old cripples. Of those capable of instruction it is noted merely that they should be sent to the school of the orphan asylum "when they could stand it." The cripple department was abolished in 1808, probably because the room was needed for the insane.

Such provision for cripples, however, gave them asylum only, and did nothing in a constructive way to better their condition, but the rise of the science of orthopedics was responsible for the ensuing improvement. It is true that one of the earliest Hippocratic treatises was orthopedic in character, but the attention which had been given to human deformity by the medical profession had, up to the time of which we are speaking, been inconsequential. One of the first to give extensive consideration to such work was Andry, of Paris, who published in 1744 a two-volume work on orthopedics, illustrated. He encountered much skepticism. For example, Siebold in his *Chirurgisches Taschenbuch* (1792) claimed that the cure of clubfeet was impossible.

Another advance was made in 1780, when J. A. Venel, who was versed in both mechanics and medicine, founded an institution for the deformed at Orbe, Switzerland. Several other surgeons also did valuable work. The most complete books on the subject were by Jörg (1816).

The theories of the various orthopedists were best put into practice in an institution, and a large number of these were founded in the first decades of the nineteenth century; as, for example, those located at Paris, London. Leipzig, Lubeck, Berlin, and Vienna. One at Wurzburg, established by Dr. Heine, gained especial fame, being the first of its kind in Germany.

The first institution for the deformed in Prussia was established at Berlin in 1823, by Dr. J. G. Blömer. This was designed for pay patients from among the upper classes, but indigent crippled children were also admitted. Between the years 1823 and 1827 he treated no less than 1,179 cases of deformity, of which he claimed to cure 651. Blömer had a workroom for making apparatus, bandages, and artificial limbs. It is not known how long his institution lasted.

A similar institution was founded in Stockholm, Sweden, in 1827 by Dr. Ackermann. There was much difficulty encountered in overcoming public suspicion and distrust. Dr. Günther maintained an institution in Hamburg during the years 1832–1837. While visiting Hamburg, Dr. Zinc, of Vienna, became acquainted with this establishment, and upon his return to Vienna founded a similar one, May 1, 1838. This latter much resembled the institute of Blömer, at Berlin.

In the meantime, however, there had been founded in Munich, in 1832, the first comprehensive institution for the care and education of cripples. The Königliche Bayerische Zentralanstalt für Erziehung und Bildung krüppelhäfter Kinder was brought into being by an eminent philanthropist, Johan Nepomuk, and the principles then exemplified have in general been followed by most of the modern institutions which have since been established. A description of subsequent work, however, is outside the scope of the present article. In Denmark, England, and Italy, as well as in Germany and the United States, extensive systems of care have been built up, and in almost every civilized country of the world there is made some provision for the welfare of the cripple.

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## WEAK FEET AND POSTURAL DEFORMITY IN CHILDREN.[1]

CHARLES OGILVY, M. D., New York.

(*New York Medical Journal, Sept. 6, 1913.*)

### WEAK FEET.

Note the term "weak feet," and not "flat feet;" for the condition of weak feet should be recognized long before the flattening or lowering of the long arch of the foot has developed. The importance of the care of the feet can not be overestimated. Seldom is a weak foot recognized before flattening has developed and a long train of symptoms has followed in its wake.

The body weight normally passes through the center of the knee joint, a little to its inner side, down the leg through a line represented by the crest of the tibia, through the center of the ankle joint and over the dorsum of the foot to the second toe. When we find the foot everted (rolled outward), this relationship is immediately changed, and the body weight no longer passes over the dorsum of the foot to the second toe, but down to the inner side of the foot, to a point corresponding to the astragalo-scaphoid articulation. Just as soon, then, as this abnormal relationship is established, just so soon is there demanded of the long arch of the foot the sustenance of the body weight bearing down upon its highest point. It is then simply a matter of time before it gradually gives way. Symptoms of discomfort, and subsequently pain, develop (sometimes associated with backache), and later there presents itself to us a typical flat foot. This could have easily been prevented by the recognition of the eversion and its correction.

*Treatment.*—The proper treatment of weak feet, or even flat feet, is by no means an insertion of plates or foot supports, which the patients are usually advised to procure at some near-by shoe store. Such arch supports do more harm than good. The proper foot plate is one which supports the foot anteroposteriorly and also laterally when the foot is performing its function of weight bearing. Such a plate can only be made from a plaster model of the foot, which plaster cast is further remodeled to complete the correction of the deformity desired. Furthermore, the employment of any arch support is detrimental to the well-being of such feet unless the eversion, which has already been noted and which is always present, is first corrected. This is really the most important point in the treatment of weak feet. It can be corrected and controlled by elevating the inner side of the heel of the shoe and extending the heel forward on the sole some three-quarters of an inch. This should be done in every case.

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[1] General title of article: "Orthopedics in General Practice."

In the milder cases this alone will be found all that is necessary, provided the shoe chosen is built on proper lines—with a straight line on the inner side of the sole, etc., to obtain proper foot balance. In addition, we must, by foot exercises, strengthen the muscles which control the position of the foot in its relation to the leg, and so enable us to retain our corrected position.

### ANTEROPOSTERIOR POSTURAL DEFORMITY.

The subject of anteroposterior postural deformity is one which, up to the present time, has not been sufficiently emphasized.

If we could but have these cases recognized early we would not see so many of the marked deformities of rotary lateral curvature which are constantly being referred to us. The class of patients which are here referred to are characterized by very definite and constant peculiarities. They are those who lack muscle tone. These are the children whom you see lagging behind in their romp and play, tiring very easily, refusing to continue the game with the other children, hanging back when any active exercise is being enjoyed. They run clumsily, they walk with an ungainly gait—with rounded shoulders and head forward. In the standing posture the abdomen is prominent, the shoulders are rounded, the chest is sunken (retracted), and the head is protruded. When sitting down they may best be characterized as those who "flop over," either upon their book or upon the table before which they are seated. . . . The condition is found more frequently among girls than boys, the reason for this being that boys are naturally more inclined to the muscular activities of outdoor sports and games.

The difficulty of diagnosis from the indefiniteness of the symptoms is counteracted by the ease with which the condition is recognized when the clothing is removed and the patient is made to stand before the examiner. One recognizes at a glance the abnormal posture, and the diagnosis should immediately be made.

There is no structural change in this deformity. The position is entirely due to habit. This postural deformity can be voluntarily corrected by the patient. The condition can be cured by properly directed breathing exercises, light calisthenics, and good hygienic and dietetic care.

## FLAT FOOT IN CHILDREN.

ALBERT EHRENFRIED, M. D.

(*Boston Medical and Surgical Journal, Apr. 2, 1914.*)

A study of the records of 1,000 children under 12 years of age applying consecutively for treatment at the out-patient department of the Children's Hospital in 1912, showed 440 having some static disability of the feet. These cases could readily be divided into three classes—congenital (18), idiopathic (95), and secondary (327).

First. The diagnosis of weak, pronated, or flat foot should not be made inconsiderately. In 327 of the 440 cases the foot symptoms were secondary to some other condition which required treatment. Continued observation in many apparently simple cases showed mild rickets or unsuspected infantile paralysis, and less frequently such conditions as tuberculosis of the knee, hemiplegia, or lead, post-diphtheretic, or spastic paralysis.

Second. Eighteen of the primary cases were congenital. These, the result of mechanical influences prior to birth, are more properly classed with clubfoot; they belong to the type to which I have given the name of potential calcaneo-valgus.

Third. A study of the other primary cases, 95 in number, shows evidence of muscular insufficiency resulting from physical debility as the leading factor in causation. This debility, as shown by the records, is frequently the sequel of an infectious disease, and is particularly apparent when the child has been the victim of a series of infectious in close succession. Other static disabilities, such as relaxed knees, functional scoliosis, and gastroptosis are likely to be present.

Fourth. The secondary cases, which were in the majority, were the result of rickets or of rhachitic deformities in approximately 200 cases, of infantile paralysis in 107, and of other conditions in approximately 20 cases. In many of these the foot disability was a minor incident.

Fifth. Prophylaxis of foot disabilities consists in combating the two important causes therefor—rickets and the infectious diseases of childhood. Both of these should yield to hygiene. Measures to lessen substitute nursing of infants by means of proprietary foods or improper milk mixtures, and to control the spread of contagious diseases through schools, which at the present time are probably the chief agents in the dissemination of infections among children, will result in the important diminution in the incidence of these conditions.

Sixth. The treatment is usually effective.

## CARE OF THE EYES OF SCHOOL CHILDREN.

(*Editorial in New York Medical Journal, Dec. 20, 1913.*)

One way in which the growing interest in school hygiene is shown is the increasing demand that the eyes of the children shall be conserved by proper glasses whenever they appear to be causing trouble. This is as it should be, but the decision to do the proper thing does not always include provision of the ways and means. It is one thing to say that a child needs proper glasses; it is another to see that he gets them.

Thousands of children are directed each winter to have their eyes examined. Some of these consult specialists in their offices and receive adequate treatment. Others consult opticians or optometrists, who, for the sake of selling a pair of glasses, undertake to solve the intricate problems involved with a deftness and celerity which would be remarkable if successful. The majority, perhaps, arrive almost simultaneously at the eye clinics, which are overwhelmed by this sudden and temporary increase of the most difficult and time-consuming part of their work. A certain number of these children, but a comparatively small number, are set aside for the purpose of teaching and these receive proper attention; but in our large clinics the time of the expert is fully occupied by attending to the diseases and operative conditions of the eye that present themselves. The great majority of these refraction cases have to be intrusted to the junior assistants, who attend the clinics for other reasons than to devote their entire time to the correction of the tiresome, patience-trying errors of refraction and seldom have the skill to cope successfully with the task; so that only a small proportion of these children receive the painstaking, accurate attention to which they are entitled. The appointment of a city ophthalmologist, who prescribes from a single examination after the eyes have been placed under atropine by a school nurse gives no better results, if indeed as good.

The problem then, that grows more and more perplexing with the increasing demand for the conservation of the eyes of school children, is how to secure a means by which they may be properly examined, and it may be well to consider the solution adopted in London, as detailed by Dr. Samuel Horton Brown in the Ophthalmic Record for October, 1913. [See next article.]

This plan may not be ideal—the first attempt to solve a problem of such magnitude seldom is—but it presents three salient features which we believe must form a part of any plan that is to prove successful, viz, employment of competent ophthalmologists with adequate facilities, reasonable payment for a reasonable amount of work, and protection against overcrowding. Nothing in this militates against the use of material for instruction; on the contrary, the junior assistants, who now often have to work out their problems unassisted, would then work under the direct personal supervision of an expert and learn more quickly how to solve them accurately. Nothing except the prospect of some reward will keep the expert down to the grinding, laborious, and usually thankless task of refraction work; he will leave it for easier, more interesting, and indirectly more profitable branches of his specialty. No man can do more than a certain amount of work in a day and do it well. The crowds at the clinics at certain seasons are enough to make the most skillful despair; he can not attend to all, often not to a majority, as they should be attended to, yet if a single patient complains of lack of attention, an investigation is in order, and if the expert works overtime, he soon feels that he is not gaining the approbation of the authorities; hence the limitation of the work given him to do each day to the amount that a skillful man can accomplish successfully in the prescribed time enables him to perform it accurately and conscientiously.

Too much hurried, slip-shod work is to be seen in the refraction rooms of our metropolitan clinics. Under the circumstances we can not see how it could be otherwise, so if the eyes of our school children are to be conserved it would be well for the city authorities to take cognizance of the example set them by their confrères of London and to institute measures to secure for the children adequate expert care and attention.

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## CARE OF THE EYES OF SCHOOL CHILDREN AT MOORFIELDS, LONDON.

SAMUEL HORTON BROWN, M. D., Philadelphia, Pa.

(*The Ophthalmic Record, October, 1913.*)

The London County Council after much persuasion made an agreement with the Royal London Ophthalmic Hospital, at Moorfields, for the special and prompt treatment of the London County Council elementary school children who require glasses. The hospital equipped a model department, separate from the other clinics, where such children are treated apart from the other patients. This department has attracted considerable attention, as it is practically a school eye clinic. Five physicians are engaged in this department each week, and it also engages part of the time of the nursing, domestic, clerical, dispensing, and optical staffs. For neatness and dispatch this is the finest clinic of its kind in the world. The clerical work is done by a clerk, who employs a clean, practicable card-index system. Noise and confusion are absent. The rooms of the clinic are clean and very attractive.

The agreement between the hospital and the council is that the hospital will care for not more than 5,000 school children in the special department upon the payment by the London County Council of the sum of £1,000 ($4,800) annually, half of which the hospital retains for its expenses, dividing the other half equally among the five physicians. This yields to each physician £100 ($480) annually. The cost of examining and prescribing for each child is approximately 4 shillings (96 cents), of which the doctor in attendance receives 2 shillings (46 cents). Even in our land of high prices this would be quite a considerable item.

It is so arranged that each doctor sees not more than 12 new cases daily and such old cases as have been returned to his service. At the maximum an assistant can not consider his day badly spent when the hospital work has placed 24 shillings ($5.76) to his credit.

The school children coming to the hospital are not all exclusively refraction cases; they frequently present other conditions. These are referred back to the hospital proper. In order, however, to prevent confusion, duplication of records, etc., each day sees one of the chief surgeons of the hospital acting as medical officer for that day, and all the cases, other than refraction cases occurring in this special department, automatically belong to the clinic of the medical officer of the day and he treats them as such henceforth.

In 1912 there were 4,501 new cases of school children, with a total attendance of 11,860. There were 138 transferred to the regular outpatient department. Spectacles were prescribed for 3,878. The number of grants for spectacles was 1,156.

Regarding spectacles, the hospital neither manufactures nor sells spectacles, but arranges for the optician to attend daily at the hospital. The optician is authorized to charge prices ranging from 1s. 9d. (42 cents) to 3s. 6d. (84 cents), and, in the case of cataract patients, 5s. 6d. ($1.32). Those who can not pay these prices can, on application to the inquiry officer, be furnished with a paper stating the cost. This paper is signed by the inquiry officer, and is a certified statement in case the patient applies to some agency (there are about 800 such agencies available) toward the cost of the spectacles.

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## IS THE PERCENTAGE OF MYOPIC EYES DIMINISHING?

SAMUEL D. RISLEY, M. D., Philadelphia.

(*Journal of the American Medical Association, Sept. 27, 1913.*)

In my report of the examination of the eyes of the school children in Philadelphia, published in 1881, it was shown that the increasing percentage of myopia in the schools as the pupils advanced in age and school progress, as was set forth by the statistics of many observers both in Europe and America, was due not so much to the want of hygienic precautions in the schools as to the existing congenital defects in the eyes of the children. Many examples, it is true, were presented showing the baneful influence of inadequately lighted schoolrooms and other faulty environments over the eyes of all young children, but it was obvious from their collated statistics that the crux of the matter lay in the congenital visual defects.

The entire work was summarized in the following conclusion and recommendation:

That, given an emmetropic or normal eye, the probabilities are that no harm will come to it from the educational process. On the other hand, given an eye with an anomaly of refraction, especially astigmatism, the probabilities are, other things being equal, that the educational process will be fraught with pain and danger to the eye.

Therefore, that before entering school the possible presence of defects of vision should be excluded, and any existing error of refraction corrected as soon as any trouble is experienced.

Briefly stated, it was shown by this investigation that the emmetropic eye, notwithstanding its relatively small percentage of the whole number, was to be regarded as the model or standard eye, since it passed through the stress and strain of school life with a minimum of pain and peril, and maintained a nearly uniform percentage through all the years of school life; that pain, lowered acuity of vision and disease in the eyes with defects of refraction, especially in astigmatic eyes, steadily increased as age and school progress advanced; that with increasing school age the percentage of eyes with hypermetropic refraction steadily fell, while the percentage of eyes with myopic refraction increased in a corresponding ratio, the increasing refraction being associated with a steadily increasing percentage of pain, lowered acuity of vision, and disease of the intraocular tunics. As a corollary growing out of these findings and conclusions it was recommended that no child should be permitted to enter on the educational process until the eyes had been examined.

While these statistics were in course of preparation, I published, and later presented before the American Ophthalmological Society, the history of a large series of cases, all taken from my private-case books, in which the eyes had passed while under observation from hypermetropic to myopic refraction through the turnstile of astigmatism. These cases were presented and published to fortify the claims made in the report of the school examinations.

Twelve years later, probably because of this work, I was requested by the late Dr. William F. Norris to write the article on "School Hygiene" which appeared in 1894 in the second volume of Norris and Oliver's "A System of Diseases of the Eye." While preparing this article it occurred to me that if the conclusions based on the school report and published in 1881 were true, some demonstration of their truth should be shown after 20 years, in a careful analysis of all cases applying in the routine of professional work for relief from asthenopia by the careful correction of existing congenital errors of refraction. In Philadelphia during the period from 1874 to 1893, inclusive, ophthalmic surgeons had habitually ordered glasses for the relief of asthenopia. During this period many cases of rebellious headache and nerve storms, after Dr. S. Weir Mitchell's famous paper on their relation to eyestrain, were referred to the ophthalmic surgeon for consultation and treatment. It was therefore logical, reasoning a priori, to assume, if the conclusions of the school report based on the statistics there formulated were true, that such an analysis of the case as was proposed should show diminishing percentage in the relative number of myopic eyes and a lower degree of myopia. The work was undertaken, and the resulting figures were based on the refraction as shown by the glasses ordered for distance and constant wear. The work covered the correcting glasses for a total of 195,754 eyes, of which 8,736 were from my private-case books, all of the latter having been painstaking corrections under the use of mydriatics, pressed to the thorough paralysis of the accommodation.

This paper is a continuation of the study from 1894 to 1912, inclusive. The total number of eyes falling under the strict requirements of the analysis is 6,850.

At the present time it has been found possible to complete the analysis only for the group of cases in the first three years, 1894 to 1896, inclusive, and for the group in the last three years, 1910, 1911, and 1912, giving for these years a total of 2,297 eyes. In all of these, painstaking effort was made by every means at our command to determine the static refraction of each eye, the determination being made after the more or less prolonged use of the stronger mydriatics. Homatropin was used only for elderly persons, and then for its therapeutic effects over irritable and inflamed eyes.

A summary of the statistics shows that the percentage of myopic eyes for 1894 had fallen to 15.06 per cent, for 1895 to 13.4, and for 1896 to 13.86, giving an average for the three years of 14.07 per cent, as compared to 16.78 for the preceding three years, or 22.03 per cent, the average for the preceding 20 years. The diminishing percentage of myopia is made strikingly manifest by the figures shown in the last three years, 1910 to 1912, inclusive. In 1910 there was 13.45 per cent of myopic eyes, which fell in 1911 to 8.21 per cent, but rose in 1912 to 11.97 per cent, or an average for the three years of 11.21 per cent. The average percentage of myopia for each succeeding period of three years is shown by the steady fall from 28.43 per cent in 1874 to 11.21 per cent in 1913.

The percentage of high myopia, 10 D. or greater, during the first period of three years, shows a steady rise in the number of such eyes from 0.80 per cent in 1894 to 0.91 per cent in 1895, and to 1.86 per cent in 1896. In 1910 and 1911 not a single case of M.—10 D. was seen, reducing the average for the three years to 0.20 per cent, as compared to 1.19 per cent for the first period. The interesting fact is set forth that while the percentage of the higher grades of myopia falls with more or less regularity with the succeeding years, the lower grades less than 3 D. steadily advance, not in actual numbers but in relation to the whole number of myopic eyes.

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## SQUINT AND ITS CORRECTION.

JOHN J. O'BRIEN, M. D., Schenectady, N. Y.

(*New York State Journal of Medicine, January, 1914.*)

To advise the parents of a child who has just commenced to squint "to wait till the child is 10 or 12; that nothing can be done till then; that the child will grow out of the squint," is wholly bad. It is true children do grow out of squint, but always with a blind eye. Could parents' prevision see the sequence of procrastination there would be little danger of such counsel being accepted. In its consequence, neglect is but a step removed from destruction of the eye as a visual organ. Central vision in a neglected case of squint is seldom better than one-tenth of normal and the ability to read utterly lost. When these facts are familiar to the public, there will be no more likelihood of a child with beginning strabismus being neglected than if he had appendicitis or gall-bladder disease. Yet, as you know, it is but a short time since the public was educated to take care of the latter. The change was wrought by frequent discussion.

The younger the child the more rapid is the decrease in vision. A delay of months in a 4 or 5 year old child may not be fatal to vision, while a like delay in a child a month or two old would spell irretrievable disaster. In very young infants the deterioration of the macula is very rapid. The rule, therefore, should invariably be to institute treatment within a week of the manifestation of the squint.

The first step in the treatment is to correct, under atropine, the error in both eyes within from a quarter to three-quarters of a diopter of the full correction. The less the error the nearer should the prescription call for the full correction. This should be constantly worn. Children are never too young to wear glasses when glasses are indicated. The proper correction of the refractive error in a surprisingly large number of cases of both convergent and divergent squint will be all that is necessary to effect a permanent, complete cure. When this fails we have recourse to the other agents. These in order of importance are: Atropine to be instilled in the fixing eye; occlusion of the fixing eye; training the fusion sense and operation. The objects of treatment are to arrest the diminution of and bring back the vision to the squinting eye and restore the visual axes to normal. In cases where the above remedies fail, operation is indicated, and the one giving the best results is advancement with or without tenotomy of the opposing muscle.

With care, an abundance of patience, and some skill the vision of the eyes of these little squinters can be, if promptly treated, saved with lasting benefit to the patient and some credit to the profession.

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## WHAT THE STATE CAN DO TO PREVENT BLINDNESS.

WILLIS O. NANCE, M. D., *Ophthalmic Surgeon, Illinois Eye and Ear Infirmary, Chicago.*

(*Journal of Ophthalmology and Oto-Laryngology, February, 1914.*)

Every oculist and most general medical practitioners know that 40 per cent of the blindness of the world is preventable; in other words, that of every 10 persons who are sightless, 4 of them need not have been so. The question that presents itself in this connection is, has the medical profession been awake to the extreme importance of the subject to the extent that it should have been and has the public been sufficiently impressed with the gravity of the situation and properly informed as to the possibilities of what cooperation might accomplish toward materially improving these figures?

We all know that at least 10 per cent of all blindness is due to ophthalmia neonatorum, and that 25 per cent of all preventable blindness is attributed to this disease. There is no use arguing as to the efficacy of the Crede method of prophylaxis. Everyone admits its value. No physician can consistently object to its use. If some physicians do not employ it because it is not convenient for them to do so, the State should make it easy for them by furnishing it gratuitously in a convenient form, as is now being done in several States.

Ophthalmia neonatorum should be made a reportable disease, as is scarlet fever, diphtheria, tuberculosis, and other contagious diseases.

We all know that if cases are seen early and intelligent and active treatment is immediately instituted and continued it is rare that an eye is lost. What an appalling thing it is for us to meet, as is not at all infrequent, with a little patient whose corneæ are ulcerated and perforated, forever blind, and to consider what could have been done by intelligent treatment but a few days or weeks sooner. Early reporting of these cases to the health authorities will prevent many such catastrophes.

Trachoma is responsible for about one-tenth of all blindness in Illinois. This percentage could undoubtedly be cut down by a better understanding as to the contagiousness of the disease and the adoption of a better hygienic regimen on the part of the people at large. Patients and parents of children suffering from trachoma must be better advised of the danger of contagion and the easy conveyance of the disease by towels, handkerchiefs, bedding, and the like. The "common" or roller towel must be banished from public places by legislative enactment, as has already been done in the city of Chicago. This ordinance, as most of you know, was passed by the city council at the instance of your chairman. Its enforcement and the publicity given to its consideration has doubtless been the cause of preventing many cases of serious ocular infection and consequent blindness.

At least 5 per cent of blindness results from ocular injuries. The greater number of these injuries are preventable, many of them being due to carelessness and ignorance. How frequently we see children blind or partly so as a result of an injury of the eye by scissors, knife, or other similar instrument placed in their hands by thoughtless parents or friends. The air rifle, for which there is no earthly excuse for existence, annually claims a harvest of blind eyes. Even the water core golf ball has contributed its share to blindness as a result of its dissection by the inquisitive modern youth. Most of these injuries, as also others caused by supposedly harmless toys, could have been prevented had the guardians of these victims appreciated the dangers of such devices. A campaign of education is needed in this direction.

Industrial accidents are not occurring with the same degree of frequency as they did in years gone by. Manufacturing and railroad corporations in Illinois are keeping an even pace or better, I believe, with those of other States in the protection of their employees against eye injuries. In many of the shops and factories, however, and let it be said, frequently against positive orders to the contrary, the custom of removing foreign bodies from the eye by fellow workmen is still persisted in. Every eye surgeon knows the positive iniquity of such procedure and has seen dire results following the custom. Shop foremen and workmen must be better advised as to the dangers of such practice, and those in authority must see to it that the custom is abolished.

Wood-alcohol blindness has become of sufficiently frequent occurrence to demand better regulation of the use of the drug in industrial pursuits and in its sale to the public. Both employers of labor and the public generally must be warned of the poisonous nature of this preparation and of its influence in the production of blindness. There is opportunity in Illinois for legislative enactment restricting its use commercially and requiring proper and comprehensive labeling.

There is opportunity for improvement in the school system of our State in so far as it relates to the illumination of schoolrooms, the size and position of desks and seats, the size and character of the print of books, the kind of paper used, etc. When it becomes generally known by school authorities and the public that the beginning of much serious eye trouble, sometimes leading to blindness, has its inception in the schoolroom, more attention will be paid to ocular hygiene as it particularly relates to this aspect of the subject.

## PREVENTABLE BLINDNESS—A CHALLENGE TO THE PROFESSIONS.

HENRY COPLEY GREENE, B. A., *Field Agent for the Conservation of Eyesight, Massachusetts Commission for the Blind, Boston.*

(*Journal of the American Medical Association, Sept. 27, 1913.*)

### CONCLUSIONS.

The problem of unnecessary blindness, which has so largely baffled and sometimes even disgraced the professions of medicine, business, statecraft, and social service, demands for its solution the following measures:

1. A campaign of medical and lay research and education, Government action, medical treatment and social work carried on, whereever possible, to limit and to remedy ocular disease, especially the more prevalent and damaging diseases and defects.

2. In the work of public education, special stress to be laid on the importance not only of ophthalmia neonatorum and trachoma as causes of blindness, but also of glaucoma, syphilis, and ocular injuries.

3. Medical schools to emphasize the interrelation of ocular and general disease, to teach their students the importance of consultation with ophthalmologists, and a high sense not only of human service but also of the physician's duty to uphold the health laws, both National and State.

Hospitals and clinics urged to provide ophthalmologists with every possible facility for the diagnosis and treatment of obscure cases, including the help of pathologists, syphilologists, brain specialists, Roentgen-ray specialists, and others.

4. The prevalence of blindness studied in each State in relation to its more prevalent causes, on a basis of reports of cases of blindness to State commissions or other central agencies.

5. To promote such intelligent study of the prevalence and results of eye diseases, a committee of the American Medical Association to request hospitals and ophthalmologists to include in all their eye records the following data: Age; sex; single, married, widowed, or divorced; birthplace; birthplace of parents; occupation or school grade; in possibly syphilitic cases, the number of children still-born, dead, or living, and in traumatic or possibly traumatic cases, the tool or machine used, and the manner of injury.

6. To facilitate the comparison of results, the following standards of vision officially adopted: For blindness, the German standard, vision fingers 1 foot or less; practical blindness, vision less than 20–200 with glasses; partial disablement, vision 20–200 to 20–50, inclusive, with glasses.

7. Making it the duty of the State boards of health or of special private agents to study the needs of all localities; and in cooperation

with medical schools and hospitals, to bring to the notice of young ophthalmologists opportunities for work in places especially requiring their services.

In remote districts, where peculiar conditions require it, such clinical expeditions as those of Dr. Stucky in the Kentucky mountains.

In large cities, self-supporting evening clinics, with paid ophthalmologists in attendance, organized to compete with charlatans and inefficient practitioners and to provide self-respecting patients on low wages with facilities for expert treatment otherwise hard to secure.

In clinics and hospitals, the specialist's work made more efficient by insisting on proper treatment of diseases underlying local eye symptoms and by keeping patients under treatment long enough to get results.

8. Paid social workers made part of the regular staff of all eye clinics, so as to increase their efficiency in the prevention of blindness from glaucoma, uveitis, etc., and to economize the work of the physicians in charge as fast as the necessary funds can be secured.

9. In schools, the pupils' eyes regularly examined, preferably by trained physicians; records kept showing the effect of the school curriculum on eyesight, and parents induced or compelled to furnish necessary eyeglasses or treatment for the eyes. If necessary, the State "neglect law" amended to make this possible. In the management of institutions, State and local authorities to set a standard of work for the preservation of eyesight.

Especially in reform schools and prisons in which the inmates are shut away from the usual medical facilities, ophthalmologists regularly in attendance; and close cooperation secured between ophthalmologists, general physicians, and the probation officers having oversight over discharged prisoners. All male gonorrheal and all syphilitic patients detained until cured.

10. Classes especially adapted for children with defective eyesight organized in all large cities, not only to provide education for children not properly inmates of institutions for the blind, but also to aid in the preservation of their sight.

School children with the vision of both eyes defective, or with one eye practically blind, guided toward occupation relatively free from ocular injuries.

11. State birth registration laws amended to secure birth notification within 3 days, and preferably within 48 hours; and warnings as to the danger of ophthalmia neonatorum sent to all mothers immediately on receipt of birth notices.

Obstetric clinics promoted to furnish adequate nursing and medical service to the poor in large cities. Midwives trained, registered, and supervised in cities in which their services are necessary.

A suitable prophylactic distributed free to all physicians and to midwives. The use of this prophylactic required at all births in lying-in hospitals or in the practice of midwives, and at least recommended strongly to physicians.

The symptoms of ophthalmia neonatorum defined by the American Medical Association as redness and swelling of the eyelids and unnatural discharge from the eyes, within 30 days of birth, and made reportable by physicians as well as nurses and parents.

Physicians, as well as midwives, prosecuted whenever necessary to secure observance of the reporting law; and physicians admonished by their State societies for failure to obey the law or to secure adequate treatment and nursing for serious cases.

Local boards of health given ample powers over reported cases, subject to the supervision and control of the State boards in requiring adequate standards of treatment Minimum requirements defined by the American Medical Association, as the attendance of an ophthalmologist, or of a physician experienced in the treatment of ophthalmia neonatorum, assisted in all but the lightest cases by at least one trained nurse.

12. Trachoma made reportable in all States in which it is prevalent, proper treatment insured under public supervision, and in case children are affected, special schooling provided.

13. Workers for conservation of vision to join with associations for sex education, etc., (*a*) in setting adequate standards of treatment for syphilis, congenital and acquired; (*b*) in raising the physical standards of marriage; and (*c*) in urging the Federal Government to extend syphilitic patients the system of exclusion at the port of embarkation, now applied to emigrants with trachoma.

14. Legislation against holiday injuries, etc., and popular education as to the dangers of nonindustrial injuries of the eye.

Cooperation with both employers and employees in the elimination of industrial injuries.

Teamwork with the American association for labor legislation to secure the enactment or amendment of factory inspection and workmen's compensation laws, so as to provide for study of industrial conditions affecting eyesight, protection from injury and disease, and special compensation not merely for "total and irrecoverable blindness" of either or both eyes, but also for practical blindness, defined as reduction of vision to one-tenth of normal with glasses.

15. A joint committee of the American Medical Association and the existing State organizations for the prevention of blindness and the conservation of eyesight to provide for interchange of information through periodic reports from each State, published in ophthalmologic journals and the Outlook for the Blind, and as soon as any vital demand is manifest, to promote a federation of all State committees and commissions actively at work for the preservation of eyesight.

## THE ERUPTION AND DECAY OF THE PERMANENT TEETH.[1]

ROBERT BENNETT BEAN, Tulane University.

(*The Anatomical Record, May, 1914.*)

Data as to 2,221 school children, viz: 776 Filipinos—630 male (5 to 30 years), 146 female (5 to 30 years); 628 German—322 male, 306 female; 817 American—407 male (5 to 18 years), 410 female (5 to 18 years); total, 2,221.

### ERUPTION OF THE TEETH.

The Filipinos are from one to four years earlier than the Germans and Americans in the eruption of the permanent teeth, and the Americans are slightly earlier than the Germans.

The females are more precocious than the males in the three groups, but this difference is very slight among the Filipinos, and a little less among the Germans than among the Americans.

The Filipinos are more homogeneous sexually (there is less difference between the sexes) than the Americans, who are more heterogeneous than the Germans.

The lower teeth erupt before the upper, except that the upper premolars erupt before the lower. The permanent teeth erupt at three periods, about the ages of 7, 10, and 18 years, in connection with the eruption of the three sets of molars, and the first two periods alternate with periods of rapid growth in stature.

The teeth erupt in the following order:

1. Lower first molars.
2. Lower median incisors.
3. Upper first molars.
4. Upper median incisors.
5. Lower lateral incisors.
6. Upper lateral incisors.
7. Upper median premolars.
8. Lower canines.
9. Lower median premolars.
10. Upper lateral premolars.
11. Upper canines.
12. Lower lateral premolars.
13. Lower second molars.
14. Upper second molars.
15. Lower third molars.
16. Upper third molars.

This order is followed by the Germans and Americans and also by the Filipinos except that among the Filipinos the canines erupt earlier than the premolars and upper lateral incisors, and the canines erupt from two to four years earlier in the Filipinos than in the Germans and Americans.

### THE LAW OF ALTERNATION IN DEVELOPMENT.

A law of alternation in development has been deduced, based upon the alternation of periods of acceleration and retardation in the growth of the long bones (stature), upon the periods of acceleration and retardation in the development of the permanent teeth, as well as from a general knowledge of development, especially from the researches of Donaldson, Jackson, and others. This law may be formulated somewhat as follows:

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[1] Since this bulletin went to press, this article has appeared in extended form in The Pedagogical Seminary, December, 1914.

There are one or more periods of acceleration alternating with periods of retardation in the development of the structures of the body. The periods of acceleration in the development of one structure are synchronous with the periods of retardation in the development of another.

The law is not only applicable to normal development, but also seems to apply to abnormal development through a process of compensation. If one structure is unusually precocious in the periods of acceleration in development, its complementary structure will be backward in the period of acceleration, and vice versa. Thus the upper canines are precocious in the Filipino boys, and the upper later incisors are backward; and the upper lateral incisors are precocious in the Filipino girls, and the upper canines are backward. Other examples could be cited, but these suffice to illustrate the law.

### DECAY OF THE TEETH.

The temporary teeth of the Americans are worse than those of the Filipinos which are worse than those of the Germans. The permanent teeth of the Americans are worse than those of the Germans which are worse than those of the Filipinos. The girls have worse teeth than the boys in all the groups.

### MORPHOLOGIC FORM AND TEETH.

Those individuals with long faces, heads, and noses, and large occipital circumferences of the head have worse teeth than those individuals with broad heads, faces, and noses, and large parietal circumferences of the head; and the teeth of the former develop earlier than the teeth of the latter.

The relative number of the former is greatest among the Americans, least among the Filipinos, and nearly as great among the Germans as among the Americans. The former increases with age, and the latter decreases.

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## THE CAUSES OF DENTAL CARIES.[1]

EDGAR D. COOLIDGE, D. D. S., Chicago, Ill.

(*Dental Cosmos, February, 1914.*)

In a general way dental caries may be considered as having—first, an exciting cause, and, second, a predisposing cause.

*Exciting cause.*—The exciting cause is twofold: Acid-forming bacteria, active and fermentable carbohydrates, passive. The mouth always contains the first, and the environment is such as to produce growth in almost all cases where the second element is present, providing these bacteria be undisturbed. With the growth of these bacteria, there is a product of metabolism formed which causes the destruction of the tooth substance by a solution of the calcium salts of the enamel. The diastatic enzyme—ptyalin—and the product of metabolism of bacteria in the presence of carbohydrates have the power of converting carbohydrates into lactic acid. Lactic acid is considered as the force which attacks the enamel, producing the beginning of decay. ("American System of Dentistry," vol. 1, p. 805.)

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[1] General title of article: "The Etiology and Progress of Dental Caries."

Before considering the predisposing cause, let us recall the definition of that term. According to Gould, it is—

> that condition of the body in which causes that leave other persons unaffected call forth an attack of disease in individuals predisposed. The term at the present time refers especially to susceptibility to infectious diseases, and implies a peculiar condition of the bodily juices or cells, in which these are unable to repel the invasion of pathogenic microorganisms.

*Predisposing cause.*—There may be local and general predisposing causes. Local predisposing causes may be considered as those conditions of the surfaces of the teeth which lessen their resistance to the attack of the active force and the environment of the teeth, which may be favorable to the action of bacteria upon carbohydrates to form lactic acid.

General predisposing causes are those influences of heredity and of bodily condition which lower the resistance of the teeth to attacks of bacterial action. Some hereditary influences may have their expression locally, as the inherited tendency to defective formation, irregularities of alignment, etc. The age and bodily condition with regard to systemic disorders influence the local environment of the teeth.

The study of the cause of caries involves two lines of investigation, one dealing with the active force that is ever present and the other with the power or ability peculiar to the tooth and its environment to resist the attack of this force. Both these fields appear of equal importance in regard to the cause of caries and to the control of the disease. Whether the problem be solved by controlling the bacterial action, hastening the reduction of carbohydrates, or by increasing the resisting power of the teeth and their environment, matters little; the control of this condition is the goal sought for.

[Then follow discussions of the influence upon the progress of caries attributed to (1) uneven surfaces and composition of the enamel, (2) gelatinoid plaques or films as protected spots for the growth of germs, (3) the quality and quantity of saliva, (4) soft, carbohydrate food as lessening mastication and the flow and alkalinity of saliva.]

*Summary.*—(1) The active cause of caries is the presence of fermentable carbohydrates and acid-forming microorganisms.

(2) The predisposing cause is a lowered resistance due to conditions brought about by changes of habits which have affected the development of the teeth and the condition of their environment, together with habits which do not aid, and often hinder, the process by which nature attempts to preserve or protect its creation.

(3) Plaques are an important factor in the localization of caries, but there is still some difference of opinion as to their importance as causative factors, as well as to their structure and formation.

(4) The condition of the saliva, which is controllable in regard to the presence or absence of certain elements which, if present in proper proportions, might have a protecting influence upon the surface of the teeth or a resistance to the action of bacteria, is an important factor.

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## ORAL SEPSIS.

R. H. Halsey, M. D., *Adjunct Professor of Medicine, New York Post-Graduate Medical School and Hospital.*

(*The Post-Graduate, May, 1914.*)

We are not discussing a disease distinctive in itself, but the location of the incubator and the portal of entry for bacteria and toxins which have produced a constitutional result by the destruction of blood cells and paralysis of the nutrition of the body cells. The incubator is a decaying tooth or teeth, or a tooth socket, in which the growth of bacteria and the production of toxins goes on uninterrupted. The size of the area may vary from a small cavity in which a filling may have been inserted to a dead root over which a cap has been applied, or to a more extensive combination of fillings and "bridge work." In other cases, the tooth in itself may be sound, but the location of the pus is in the tooth socket, from which the purulent discharge escapes along the side of the tooth or through a small sinus which has burrowed its way from the tooth socket through the bony alveolar process and the mucous membrane to the mouth cavity, or the pus may be contained in a circumscribed, slowly enlarging abscess in the bone substance. These destructive processes in or about the tooth may go on so insidiously as to accomplish extensive destruction even of bony tissue, before the attention of their owner is directed to the condition. This fact should be emphasized, for many apparently perfect caps or fillings, when removed, are found to conceal very foul conditions without there having been any preceding toothache or tenderness to attract attention to the process. It is readily understood, and it is a fact, that the situation of the pus focus in some cases may be evident on inspection of the mouth, or its discovery may require the removal of fillings or the carefully taken radiogram to demonstrate the concealed pus focus.

From the various suppurating points the bacteria or the toxins readily gain access to the general circulation directly through the lymph or blood channels. The purulent discharge from the cavities bathes the mucous membrane of the mouth, and the tonsils offer another portal of entry. From the mouth the pus is carried to the lungs or the stomach and intestines and may act directly upon the mucous membrane to impair its functions of absorption, secretion, or motility, or after absorption from these surfaces it may impair the action of the liver or pancreas in producing their proper secretions. Such changes in the processes of digestion permit putrefaction and fermentative changes to occur in the intestinal contents. These changes permit the formation from the food of more or less poisonous products, which add their effects to those of the pus to impair the general nutrition.

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## SCHOOL DENTAL CLINICS.

(*Editorial in Boston Medical and Surgical Journal, Mar. 5, 1914.*)

The recently published proceedings of the meeting of the International Dental Federation at The Hague, in 1913, show that there are in Germany over 200 school dental clinics; in Sweden, 40; in Norway, 10. Dr. Jassen, of Strassburg, chairman of the congress, announced the following outline of rules of dental care and conservative early treatment:

> From the age of 2½ years it is desirable that children's teeth be inspected every six months in order to treat the deciduous teeth before they ache, and to allow the children to enter the public schools with healthy mouths. It is desirable that every child from this age have his own toothbrush and be practised in its use. The mouths of children who come at an older age to the school clinics should be treated as much as possible in a conservative way. Decayed teeth which can not be filled must be extracted. Dry roots of deciduous teeth must be left in the mouth till the permanent teeth appear. This will preserve the shape of the jaw. Decayed crowns with dry roots should be cut off and the roots filed smooth. The 6-year molars are to be saved if possible until the age of 12 and must be extracted only when they can not longer be saved or when there is not sufficient room in the mouth. Each child is to be treated individually, with methods suited to his age, constitution, and character.

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## THE CHILD'S HEALTH AND BEAUTY AS INFLUENCED BY THE TEETH.

HENRY C. FERRIS, D. D. S., *Chairman of Committee on Scientific Research of National Dental Association.*

(*The Woman's Medical Journal, July, 1913.*)

When the full set of baby teeth has erupted, if the child has had no obstruction in the nose and has not breathed through the mouth, the teeth will come together in their normal relation, provided the child is compelled to use the muscles of mastication. If they are fed on hard substances, dried crusts, instead of milk toast and predigested foods, there will be a normal development of these bones, which results from increased circulation of blood by exercise of the part. You can not develop the muscles of mastication through this exercise without developing the bone; otherwise the muscle would become so strong that it would tear the bones of the face to pieces.

As the permanent teeth erupt back of the baby teeth, you will see the necessity of preserving every one of the baby teeth in its normal position. If they should decay, they must be filled. If they are lost, something must be substituted to maintain the continuity of the arch. (This may be a metal bar.)

Orthodontic operations are showing wonderful results by returning the parts to their normal position, but it is seldom that the earmarks of this lack of development are eradicated, even after the orthodontist's best efforts have been expended, unless these conditions have been detected in the baby set.

There is still a more important fact, and that is the upper jaw articulates or comes in contact with 13 bones of the cranium, and the under jaw in contact with 2 bones of the cranium; therefore, any mechanical interference with the development of the maxillary bones influences the shape of these structures, which form the brain case.

In order to prove this assertion Dr. Lawrence Baker, assistant professor of orthodontia of the Harvard Dental School, carried out an experiment with two rabbits of the same age. From one he extracted all the teeth on one side of the lower jaw. For a period of a few months the two rabbits lived together on the same food. They were then killed.

The normal or control rabbit's skull developed uniformly. The operated rabbit, being minus the functioning forces of mastication and the stimulus of muscle pull, had all the bones of the cranium on the defected side undeveloped; and there was a curvature of the central line in all the bones on the unaffected side. The ribs and breastbone of the animal also showed marked lack of development. The importance of this observation needs no explanation; it speaks for itself.

Delaying the treatment of these conditions of the teeth will have a lasting influence upon the development of the brain box. We can reasonably conclude that the brain of an individual type, from any species, should normally develop to a given size. If this growth is retarded by lack of development and function of the teeth, the brain box must be more or less influenced in the development. Being in possession bf these facts, we are neglecting our children if we do not study their early growth.

Do not forget the message that I bring you: A perfect head and face for the type of your child can be developed through the exercise of the organ of mastication, and your child can chew himself into healthy development.

# COMBINED DENTAL AND NASAL TREATMENT TO RESTORE NORMAL NASAL RESPIRATION.

JOHN A. THOMPSON, M. D., Cincinnati.

(*Ohio State Medical Journal, February, 1914.*)

The maxillary suture is present until middle life, when the union of the upper jaw becomes bony. Before bony union occurs this suture can be separated by a very simple appliance. A metal bar is attached to the lingual surface of the teeth on each side from the cuspid back to a molar. A tube is fastened to one of these bars and to the other a threaded bar with a nut adjusted to it. By turning the nut pressure is brought against the inner surface of the teeth. Dr. German, with whom I have worked, puts on two cross bars and nuts so we can regulate the amount of expansion better and get the widening either forward or back in the mouth as needed. The nuts are turned twice daily until firm pressure is felt but no pain experienced. In a period varying from four days to two weeks the jaws separate. The central incisor teeth previously overlapping in many cases will be found separated. As no pressure is applied near the incisors, they must be carried out by the separation of the bone in which their roots are embedded. Intranasal measurements show there is a distinct widening of the nares. While the increase in space horizontally may be only three-sixteenths of an inch the patient notes immediately the greater freedom of respiration. Two conditions explain the marked relief with so little widening of the nares. The first is the tendency of the septum to straighten. The opening between the maxillæ at the base of the septum relieves the pressure on it, and its elasticity causes an approach to the normal straight position. Dr. Black believes that, with the outward motion of the alveoli, there is a lowering of the palatal arch, with increased room for the septum. Dr. Brown does not agree with him. This force, the elasticity of the septum, which so often caused unsatisfactory results in the Asch and other septal operations, becomes an aid and not a hindrance after separation of the maxillæ. The passage of an increased amount of air relieves what Black calls the ''static congestion'' of the membrane. The turbinate bodies become smaller and this gives additional breathing room. In some cases removal of a spur is required, and in a few patients a submucous resection may be needed, but the amount of operative intervention required in the nose is very much lessened by the preliminary separation of the jaws. It may be remarked in passing that the amount of dental work necessary to correct malpositions of the teeth is also lessened. In children this is an important matter, because I have seen the health of a child seriously injured by the pain and by the sepsis of the mouth inseparable from ordinary orthodontic measures.

We, as rhinologists, are familiar with the wonderful improvements in health that follows the removal of tonsils and adenoids. Part of the improvement is due to restored nasal respiration and part to freeing the child from chronic septic absorption from the diseased organs. The same improvement, although in lesser degree, follows establishment of nasal respiration by widening the nose.

After a sufficient amount of space has been obtained the expansion apparatus can be removed and a simple retention plate of hard rubber used to prevent contraction. The space between the separated jaws fills with new tissue in three months. Whether this new growth is connective tissue cartilage or bone has not been determined. My own belief is that the base of the septum drops into the space and aids in closing it. A good X-ray plate might aid in answering this question, but it is hard to get one without the shadow of the septum covering the part we wish to study.

With a method that has proven its worth, the question arises at what age should it be used. We rarely find this deformity before the seventh year. It is not often marked before the tenth year. At any age between 10 and 35 the work can be done. The earlier it is undertaken the easier it will be for patient, dentist, and doctor. If done early enough, we escape the chest deformities that result from obstruction of the upper respiratory tract and lower the vital capacity of the individual all his life.

It is claimed by dentists (Bogue and Davenport) that early examination of the deciduous teeth will show whether or not a normal eruption of the permanent teeth will occur. In normal growth of the jaws and nose there should be a separation of the temporary incisors when the child is 6 years old. If it is not present, the growth of the arch has been arrested and the child will have a narrow nose and irregular front teeth, because the permanent ones are much larger than the milk teeth and need a larger arch. Dr. Brown claims in a majority of cases the deciduous teeth are firm enough to permit of jaw separation and the prevention of future trouble in both nose and mouth.

The human voice is a compound tone with a fundamental note produced in the larynx and overtones produced in the pharynx, mouth, nose, and accessory sinuses. The normal development of the mouth and nose is essential to easy voice production and health of the larynx. When we secure normal nasal respiration through maxillary separation, we prevent many inflammatory complications in the lower respiratory tract.

## HYPERTROPHIED TONSILS AND ADENOID VEGETATIONS IN PUBLIC-SCHOOL CHILDREN IN NEW YORK CITY.

S. JOSEPHINE BAKER, M. D., *Director of Bureau of Child Hygiene, Department of Health, New York City.*

(*Laryngoscope, February, 1914.*)

The department of health of New York City, through its school medical inspectors, supervises the health of 825,000 school children of this city. Since 1905 the system of school medical inspection has included the physical examination of each child on its entrance to school and on an average of every three years thereafter. School inspectors are all appointed from lists furnished by the civil service commission, and are all physicians licensed to practice in the State of New York. The majority are graduates of the New York City colleges.

During the early part of this work it was reported by those inspectors that approximately 30 per cent of the children in the schools were suffereing from hypertrophied tonsils, with or without a form of obstruction to the nasal breathing which implied the presence of adenoid growth. It was the desire of the department to fix a standard, as far as possible, for the class of cases where operation would be advisable, and to this end a letter was sent to a number of eminent specialists in nose and throat diseases in this city, asking them what, in their opinion, were the exact indications for the operative treatment of enlarged tonsils. It was a significant fact that no two of these specialists agreed as to the exact details; most of them dwelt upon many features of this condition which, from the standpoint of the medical inspector, were not practical. The opinions expressed by them revolved about the following points: Size of the tonsil, adhesion to the pillars of the fauces, smoothness of the surface, or the presence of large and irregular crypts, the embedded tonsil, the pathological tonsil, the tonsil which was subject to frequent attacks of acute inflammation, the susceptibility of children because of this enlargement to infectious diseases, and the question as to whether the tonsil was hypertrophic or hyperplastic. There was no unanimity of opinion, nor was any statement made that was practical to apply to the work of medical inspection of school children. In fact, it could readily be gathered from the statements made by them that if a set of 100 children with enlargement of the tonsils was submitted to these seven specialists no agreement could be reached between them as to the indications for operation in these cases.

Realizing, then, the marked difference in opinion that must be considered even in the diagnosis of these cases, the Bureau of Child Hygiene established a standard as follows: That no case was to be considered as true hypertrophy of the tonsils unless the hypertrophy was such as to interfere with the nutrition of the child or to cause secondary disturbances, interfering with its health and, incidentally, with its school progress. In other words, no tonsil was to be considered hypertrophic unless the medical inspector, considering it as his personal case, believed that its presence was a distinct detriment to the health of the child, and that, therefore, the tonsil should be removed. At no time has the medical inspector been allowed to indicate the character of treatment that should be considered advisable. The department of health has always taken the attitude in regard to the inspection of school children that its duties consist in ascertaining defects which interfere with the health of the children, calling the attention of the parents to the fact that the children are so affected, and making all possible efforts to see that the children in question are placed under competent medical care. The department does not feel that it should dictate the character of treatment to be obtained by the child, but holds that this is a matter which should be left to the attending physician. It also believes that its functions and efforts should not extend beyond seeing that the parents are made to realize their responsibility in regard to the welfare of their children and that the latter are placed under medical care. For this reason a certificate from a physician or surgeon, stating that a child is under his care, has always been accepted by the department as evidence of treatment, although the department realizes from extensive experience the futility of so-called "medical treatment" in the cure of either enlarged tonsils or adenoids.

In 1912, out of 287,469 children examined, 30,021 (or 10.4 per cent) were found to have hypertrophied tonsils. Of this latter number, 14,137 (or only 47.1 per cent) obtained treatment. The character of this treatment, according to the certificates of the physicians and surgeons who administered it, was as follows: Operations, 6,239, or 20.8 per cent; medical treatment, 7,898, or 26.3 per cent.

No attempt is made by the medical inspector to diagnose adenoids. It is not possible, in the ordinary school building, to provide facilities for a proper examination of the naso-pharyngeal vault, and therefore, for many years, the department has not used the term "adenoids" in its report of the physical condition of school children, but each child has been tested to determine whether or not its nasal breathing was occluded. In each such case a diagnosis of defective nasal breathing has been made, and it has been left for the family physician to decide whether or not this occlusion was due to adenoids, deflected septum, hypertrophied turbinate, nasal polypi, or other cause, and to provide appropriate treatment.

In the children's clinics maintained by the department of health all children are received the afternoon before the day of operation. They are kept there that night, regularly prepared for operation, and the following morning the adenoids or tonsils are removed under gas and ether anesthesia. The child is then kept in bed during that day, remains in bed the following night, and is finally discharged 36 or 48 hours after entrance. Nearly 4,000 such operations have been performed since the dispensaries were opened, with one fatality.

From our experience with these children we believe that these operations should never be performed except under anesthesia, and that in each case the child should remain in the hospital for 24 hours after the operation has been performed.

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## FIVE HUNDRED EXAMINATIONS OF THE NOSE AND THROAT IN AN INSTITUTION FOR DELINQUENT BOYS.

MAX TOEPLITZ, M. D., New York.

(*Medical Record, Mar. 14, 1914.*)

The Hawthorne School, the first reformatory for Jewish boys, received the first boy on April 25, 1907, and at the end of 1912 had under its supervision 316 boys from 8 to 16 years of age.

After their commitment to the Hawthorne School by the judge of the juvenile court, the boys are examined with special reference to eye, ear, nose, and throat, as well as to their general condition, and are also vaccinated. In addition to this preliminary examination the boys, according to the rule of the board of estimate and apportionment, are examined twice a year. The special care of the ear, nose, and throat has been intrusted to me. Here I have paid particular attention to the most prevalent affections—adenoids and hypertrophied tonsils.

In summing up all 500 examinations, 351 cases were diseased, of which 106, or 21⅕ per cent, had enlarged tonsils; 89, or 17⅘ per cent, adenoids; and 116, or 23⅕ per cent, were combined cases; of these, 292, or 58⅖ per cent, required operation, 23 refused it, and 74 were operated upon; 149, nearly 30 per cent, were normal. There were different degrees in size and disease of adenoids; different forms, diffuse and lumpy; different consistencies, soft and hard. The faucial tonsils also showed differences in size and consistency.

Girard College, of Philadelphia, is the only other institution in the United States besides the Hawthorne School at which throat operations have been performed on a large scale. Among 1,500 boys of from 7 to 17 years of age, tonsil and adenoid operations were advised in 152 cases, hypertrophy of tonsils was under observation in 124 cases; operations for deformities of septum advised in 25 cases; catarrhal and inflammatory conditions were recommended for treatment in 89 cases; 125 operations for the removal of tonsils were performed under general anesthesia by Dr. Joseph S. Gibb.

Examinations of the nose and throat in any institution are useless unless they are systematically followed by the necessary operation, and I claim that the removal of all faulty conditions of the nose and throat will place any institution on a more wholesome, nay, even on a well protected sanitary base. As a matter of fact, the most striking feature of the condition of the Hawthorne School at the end of 1912 was the remarkable improvement of its entire sanitary state, which was the direct result of the large number of operations in 1911. This proves not only the importance of this treatment for the Hawthorne School, but also the advisability of making it a part of the program of every juvenile reformatory.

## A REVIEW AND THE PRESENT STATUS OF THE TONSIL OPERATION.

SHERMAN E. WRIGHT, M. D., Portland, Oreg.

(*Northwest Medicine, November, 1913.*)

We have spoken of the beginning of tonsil surgery when the finger was used, we have noted the progress and changes through the hundred years when the tonsillotome was the popular instrument, and we were satisfied with excising the protruding portion of the hypertrophied tonsil down through the past decade when the pendulum swung to the extreme, and we attempted to do tonsillectomies on every man, woman, and child who happened to come our way. Now there is a reaction, the pendulum is swinging in the opposite direction, and there is a feeling among many of our best men that too many tonsils are being removed.

The tonsil becomes pathologic only when its presence injures the individual, either locally or generally, not because someone discovers a pair of tonsils in that throat. By the age of 12 to 14 years the tonsil has completely disappeared or shows as a hypertrophied or cicatricial mass between the pillars. Any tonsil which is visible to any marked degree later than this may be considered as a morbid growth due to disease and should be removed.

Until very recently tonsils were judged by their size only, although we know full well that the submerged tonsil, which may be quite small, is more liable to be doing harm than the large, discrete tonsil. When examining a throat, it does not suffice to glance at the tonsils. The anterior pillars must be pushed back and the tonsil lifted from its bed, and in many cases the tonsil must be palpated.

I wish most emphatically to go on record regarding one phase of the tonsil. Children who do not present symptoms of obstructed breathing and who have not had any tonsillar disease should be left alone. Every tonsil that comes to us is not grist for our mill. Remember that it is not a question of large or small tonsils, but a question of their condition.

It is immaterial whether you use one instrument or ten in the removal of a tonsil. The point of main interest is that the operation shall result in a complete removal of all the tonsillar tissue with the least amount of traumatism to the pillars.

A perfect anesthesia is not only essential to good tonsil surgery, but I believe we may go even further and say that perfect throat surgery is impossible without perfect anesthesia. Therefore, great care should be exercised in choosing the anesthetist for cases of throat surgery.

## WHAT RELATION, IF ANY, HAVE THE FAUCIAL TONSILS TO PULMONARY TUBERCULOSIS?

E. Fletcher Ingals, M. D., Chicago.

(*Journal of the American Medical Association, July 12, 1913.*)

I have in my files of histories of private patients over 25,000 carefully kept records, more than 10 per cent of which are of tuberculosis. In these cases careful examinations were made of the nose and throat, as well as of the chest, and the histories were carefully taken, for heredity, previous diseases, enlarged lymph nodes, general condition at the time of the examination, and indeed everything that might have any bearing on the origin or course of the disease. Dr. W. S. Bracken, one of my associates, employing all his spare time for several months and assisted by some of the other physicians in my office, has gone over these records carefully and analyzed the findings with a view to discover, if possible, a relation between the tonsils and laryngeal or pulmonary tuberculosis.

He took at random 100 cases (with no selection except to assure himself that the blanks had been thoroughly filled out), thus giving a fair average of the whole. From the records of nontuberculosis patients who consulted me for various diseases having no relation to tuberculosis, such as functional and organic diseases of the heart, asthma, simple bronchitis, pleurodynia, emphysema, pharyngitis, rhinitis, and laryngitis, he took at random 100 other records for control, thus making a fair analysis of my case records of about 25,000 different private patients. These records are far and away more complete and accurate than those of hospital patients. His analysis shows that 26 per cent of the tuberculosis patients had some macroscopic change in the tonsils varying from slight enlargement to marked hypertrophy, ulceration, or other evidence of disease. In only 4 per cent was there any record of cervical adenitis, and in only one of these was there any change in the tonsils, which were noted in that case to be slightly enlarged.

Among the control cases, 46 per cent of the patients had enlargement or other evidence of disease of the tonsils, nearly twice as many as in tuberculosis cases; and not one of them had cervical adenitis. So far as these records go they show that affections of the tonsils are much more frequent among nontuberculosis than among tuberculosis patients; but that cervical adenitis, while comparatively infrequent (4 per cent only) in tuberculosis patients, is much less common in nontuberculosis patients. It is a matter of surprise to me to find that in only one of the cases of cervical adenitis was there even the slightest evidence of disease of the tonsils. Ten or fifteen years ago it was quite commonly believed that disease of the tonsils was a frequent cause of pulmonary tuberculosis; but subsequent research appears to have proved that tubercle bacilli may enter and pass through the tonsils and cause disease of the cervical lymph nodes, while the tonsils themselves may escape all injury; and this research has also shown that there is no direct connection between the cervical lymph nodes and the pulmonary lymphatics, and, therefore, that involvement of the lungs associated with cervical adenitis must be a systemic infection rather than a result of the disease of the lymphatics.

From a thorough study of the literature and from an examination of my records I am forced to accept as correct the consensus of opinion, which now fully sustains the personal views of Jonathan Wright, who wrote me in November, 1912, saying: "To tell the truth, I do not believe there is any relation between the tonsils and pulmonary tuberculosis."

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## HYPERTROPHIED TONSILS INTERFERING WITH THE ACTION OF THE PALATE AND CAUSING DEFECTIVE SPEECH.

G. Hudson-Makuen, M. D., Philadelphia.

*(Laryngoscope, January, 1914.)*

One of the many objections offered to the removal of the faucial tonsils is the fact that the operation is liable to be injurious to the voice and speech, but little reference has been made to the fact that both the voice and speech may be impaired by not doing the operation or by leaving the tonsils intact.

I have previously called attention to the effect upon the palate of hypertrophied and degenerated tonsillar masses, the larger ones, by reason of their bulk and consequent pressure upon the pillars, interfering with the action of the palate, and the smaller degenerated and catarrhal masses, by reason of their sepsis and by the spread of their infection, appearing to so obtund the nervous mechanism of the palate as to cause a sluggish or paretic action of its muscles.

The effect upon the speech is similar to that of insufficiency of the palate from other causes, such as a cleft palate or other forms of paralysis.

My practice is to do a complete tonsillectomy only in those cases in which there is a marked degenerative and catarrhal condition of the tonsils, with thickening of the plica and capsule generally; but in those cases in which there is mere hypertrophy of the tonsillar masses I am of the opinion that a more or less thorough removal of the tonsillar tissue only, leaving the capsule intact, although the more difficult, is the more desirable operation so far as the speech and voice are concerned, because the resultant motility of the palate is better than it is in those cases following complete extracapsular tonsillectomy, in which we are liable to have cicatricial adhesions and contractions. This, however, is a subject for discussion, and a most interesting one, because it includes the whole question of so-called tonsillotomy versus tonsillectomy.

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## WHY DOES THE OPERATION FOR REMOVAL OF ADENOIDS FREQUENTLY FAIL TO RELIEVE MOUTH BREATHING?

H. M. McCLANAHAN, M. D., Omaha, Nebr.

(*Archives of Pediatrics, October, 1913.*)

The lay public has been taught that mouth breathing in children means the presence of adenoids, nothing more, and that certain relief will follow an operation for their ablation. This opinion prevails largely among members of the medical profession, and until beginning this study that was the belief of the writer. For many years I had noticed that the degree of relief from mouth breathing following adenoidectomy varied greatly in different cases—in some very slight, and in others prompt and decided. The following incident attracted my attention. On the 1st of August, 1909, I operated upon a boy 8 years old for adenoids. There was slight if any relief from the mouth breathing. Because the operation failed to give relief, the mother refused to pay the bill. While the mother's contention was correct, I was satisfied that the operation was thorough, that the vault of the pharynx was free from adenoids, and that the failure was not due to any fault of mine. To satisfy myself and to determine if possible the reason for the failure, I began a study of the effect of this operation in children coming under my observation, not only cases upon whom I had operated, but all who had received the operation.

I have examined 52 children who had been operated upon for the removal of adenoids. I am not able to give in all cases the date of the operation. These children ranged in age from 6 to 12 years. I purposely excluded all cases under the age of 6 years. Twenty-eight were girls and 24 were boys. There were more girls than boys for the reason that many of the girls were operated upon for the cosmetic effect. Including my own cases, the operation had been performed by eight physicians. Four of these are personally known to me to be competent operators, men whose practice is limited to the nose and throat. I emphasize this point because the failure to relieve mouth breathing is often attributed to the lack of skill on the part of the operator. Almost without exception I found that the mother was disposed to criticize the operator in all the cases where the result was not satisfactory.

In 24 of the cases the operation was a failure in so far as nasal inspiration was concerned. Three of these cases had been subjected to two operations and one had been operated upon three times, in each case by a different surgeon. In 20 of these 24 cases I am satisfied that the failure to relieve mouth breathing was not due to faulty technique upon the part of the operator or to recurrence of the adenoids, but to anatomic conditions in the superior maxilla. In the other four there were adenoids in the vault of the pharynx at the time of my examination, due either to recurrence or faulty technique. In these cases mouth breathing was due to obstruction in the pharynx and not to defective development. In 6 of the 24 cases there was decided hypertrophy of the tonsils, but I do not believe these caused the mouth breathing. However, I may say in passing that the history was that all of these children snored during sleep. In all of the 24 cases there was bad coaptation of the teeth, as well as distinct evidence of the maldevelopment of the superior maxilla and the other bones in intimate relation to it, namely, the vomer, palatine, and turbinal bones. The type of malformation in 20 of the 24 cases was as follows: The hard palate was deep and either circular or angular. There was retraction of the mandible, due to its being drawn downward and backward, and consequent apparent lengthening and actual narrowing of the superior maxilla, and in all of this number the upper lip appeared short and could be brought in coaptation with the lower lip only by a strong muscular effort. This is the typical so-called adenoid face, but the appearance is due to defective development of the upper jaw.

As a result of this brief study the writer is entirely convinced that it is possible to determine in advance whether or not relief from mouth breathing will result from the operation of adenoidectomy. In a number of recent cases upon whom I have operated, and cases operated upon by other physicians whom I had examined, I have been able to say in advance whether or not the operation would give relief to the mouth breathing, and this opinion has been verified by an examination of the case after the operation. I do not wish to be understood as saying that children with defective coaptation of the teeth should be deprived of an operation if adenoids are present. There are other valid reasons for their removal aside from mouth breathing, but in this class of cases the operation should be the preliminary step in the treatment, and in justice to these children the parents should be informed as to the nature of the deformity and of the probability of relief by proper treatment from an orthodontist.

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## WHY IS NASAL CATARRH SO PREVALENT IN THE UNITED STATES?

WOLFF FREUDENTHAL, M. D., New York.

(*New York Medical Journal, Jan. 3, 1914.*)

It is proved that dry air, if inhaled, will become saturated in the nose and nasopharynx—that is to say, the drier the air we inhale the more moisture will be given off by the nose and nasopharynx. The work of these organs will be so much greater with every particle of air we inhale. How long the mucous membrane of these parts will be able to furnish the necessary water supply will only, therefore, be a question of time. Consequently, we will, sooner or later, reach that point where the mucous membranes of these parts will be as dry as a well in summer. This will occur, for example, in very cold weather, only temporarily in perfectly healthy persons, or permanently, as we see it in so many thousands of cases, in pathological conditions.

Thus, a dry rhinitis or rhinopharyngitis develops, and I could experimentally produce the same conditions in anyone of you under like surroundings. This state of the nasal mucosa makes it often appear as though the patient had a coryza. For example, if he goes out in winter, his nose will discharge because the mucosa is unable to absorb moisture from the atmosphere, as its surface is either dried up or covered with scabs. On the other hand, every mechanical irritation will produce running of the nose or sneezing much more easily than in normal conditions, since the great protection of the nose, the epithelium, is gone. These symptoms often lead to a wrong diagnosis, and the patient is treated for an acute cold when he has nothing but a chronic rhinitis, for which just the contrary treatment is indicated.

As most of us are exposed to this excessively dry atmosphere for the greater part of the time, it is evident that the lack of humidity is the greatest factor in producing nasal and postnasal catarrh, with all its sequelæ. To the last-mentioned class belong, among others, the granulations or vegetations in the vault of the pharynx, etc.—this only apropos.

But there are other etiological factors to be mentioned here, dust, for example, and that may include all other mechanical or chemical irritations and repeated attacks of acute coryza, due to a "cold."

*Dust.*—I hope you will be convinced from the foregoing remarks that dust does not play that important rôle in the etiology of catarrh which was attributed to it by many writers 30 years ago. But just walk down our avenues on a windy day and you will be convinced that it has some very pernicious effects. The dust developed in our city from the dry sweeping of the streets, from the tearing down of buildings, from the upheaval of roads, from the automobiles, from the dumping of ashes into uncovered ash carts, etc., all these remind one of a government of the Middle Ages and not of a civilized city of the twentieth century. A period of long drought in our dust-laden town is a calamity in winter or summer. Rain and snow are blessings that not only clear our streets, but our upper air tracts as well. Dust plays some rôle in producing catarrhal conditions of the nose; added to the lack of humidity, it becomes an important etiological factor. We omit here the other ill effects dust has on the organism.

*Colds.*—Is there really such a thing as the catching of a cold without an infection? I am firmly convinced that there is. In spite of the fact that the word "cold" has been and still is so very much abused by physicians and laymen, I can not believe that every coryza is of an infectious or contagious nature, and I shall never give my consent to the demand that every person who sneezes should be isolated and treated like a person dangerous to the community. That is what some overzealous medical men are advocating. True, there is an infectious coryza, especially of grippal origin. If one child in a family is stricken with influenza you will isolate it, whether it sneezes or not. In such a case the coryza is only the forerunner or herald of a general infection. On the other hand, take the following imaginary example: You suddenly expose several persons who were overheated to a low temperature and a strong current of air. One person will start in to sneeze; another will have an acute otitis; a third, an irritation of the bladder; a fourth, diarrhea; and in the fifth may develop a facial paralysis. Will any sensible person conclude that these five persons were affected simultaneously by the same bacillus in such different ways? And yet that is what some men try to make us believe. Is it not more credible that an exposure to the inclemency of the weather struck every one of these five persons at his *locus minoris resistentiæ?* Can anyone convince you that a man who commences to sneeze after walking barefoot through his room caught an infection? Indeed not. These cases are as plain as they can be, but not so their treatment.

Let me insert here a little humoral pathology for your consideration. It is not always the quantity of garments worn nor the lack of them, nor is it always the strength of a draft nor the current of air that counts in the production of these colds. Of much greater importance is the condition your entire organism is in at the time of exposure. For example, while bathing, rowing, running, etc., a person is in a state of constant and laborious activity, thereby setting in play those processes by which animal heat is generated. This causes a vasomotor reaction that will protect the organism for quite some time, and in such a state you may expose yourself much more than when little heat had been produced and that without harm.

The therapy of these affections lies in their prevention. To prevent a coryza and other "colds" means restoration of the function of the skin to its normal physiological action. The skin is the one organ above all that ought to protect us against all thermal and climatic influences, but in this age it has been, so to speak, put out of commission. Our garments are so manifold that in many instances they do not allow the air to penetrate to our skin, and the latter loses its function; consequently, a little change in temperature, a little rain or draft, will upset the equilibrium of most persons, and they will present a coryza or some other form of "cold." The fear of "catching cold" is so paramount with many persons that they consider themselves wise in wearing too many garments, as a means of protection. When winter arrives, whether it be a cold season or not, people, whether healthy or not, wear fur coats; they wear skirts and underskirts, then vests, coats, and overcoats, sweaters, and sometimes rubber coats, to be sure that they are dressed "air-tight" or "waterproof."

The same fear prevails in regard to fresh air. Many people do not dare to go out if the wind blows, or if, perchance, it rains. The children are not sent out until their fond mammas, nurses, or frauleins are convinced that no rain or snow is likely to fall; and if a child so reared is accidentally caught in a shower and takes cold, the mother reproaches herself for carelessness, not realizing that it is the whole system of former coddling that is to blame.

People speak of the hardening effect of cold baths. Very true; I recommend them myself. But we can be exposed to a cold bath or a cold douche for only a f minutes, while we might use the fresh air for hours of each day. By bringing the fresh air in contact with the body the process of hardening will be much more effective than by the use of cold baths alone.

### CONCLUSIONS.

1. In order to lessen the great prevalence of catarrh, our systems of heating should be changed so as to allow much more moisture to evaporate in each living room. That is especially important in schools or meeting halls of every kind—churches, theaters, concert or lecture rooms, and assembly rooms of every kind. A pail of water in front of the heater is ineffective. We have to employ other means in order to overcome the deficient humidity indoors.
2. In order to prevent colds we have to limit the amount of garments worn.

3. Exposure to drafts, rain, snow, and all inclemencies of the weather ought to be practiced by the youth in order to prevent the most preventable of all diseases—colds.

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## PREVENTABLE DEAFNESS.

William Hibbs Tomlinson, M. D., *Instructor in Diseases of the Ear, Polyclinic Hospital, Philadelphia.*

(*Medical Record, Sept. 27, 1913.*)

*Summary.*—(1) Middle-ear deafness comprises about 80 to 90 per cent of all forms of deafness. (2) Ninety per cent of the cases of middle-ear deafness have their origin in inflammatory conditions of the nasopharynx, with extension to the ear by way of the Eustachian tube. (3) Adenoid tissue in the epipharynx is the most frequent predisposing cause of middle-ear disease. (4) Systematic aural examination in adenoid cases disclosed the fact that a high percentage, probably 75 per cent, have some grade of ear involvement. (5) The findings of routine ear examination in children with adenoids confirms us in the belief that many cases of middle-ear deafness first noticed in adult life have their origin in inflammatory conditions of the nasopharynx, dating from childhood. (6) The milder acute forms of catarrhal otitis should receive appropriate treatment, for if untreated they are liable to assume the chronic form. (7) Routine treatment of chronic catarrhal deafness leaves much to be desired. More careful work is necessary if the best results possible are to be secured. (8) This is an age of preventive medicine. Possibly in no other field is there better opportunity than in the prevention of chronic middle-ear disease and its deafness.

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## SOME IMPORTANT FACTORS IN THE CONSERVATION OF HEARING.

C. M. Harris, M. D., *Ophthalmologist and Otologist to Conemaugh Valley Memorial Hospital, Johnstown, Pa.*

(*Medical Record, Mar. 14, 1914.*)

Diseases of the ear may be roughly divided into three classes—those affecting the parts concerned in the conduction of sound, those affecting the perceptive mechanism, and those acting on both. The external ear, external auditory canal, membrana tympani, Eustachian tube, middle ear with its contained ossicles and attachments, and the cells found in the mastoid process, are all of service in the conduction of sound from the outer atmosphere. Lesions in any one or more of these parts deserve attention on account of the primary or secondary effect they may have on hearing.

Sound waves are collected by the external ear, pass through the canal to the membrana tympani, causing it to vibrate. These vibrations are then carried by means of the ossicles to the membrane filling in the oval window, which transmits them to the fluids and nerve endings of the internal ear.

Malformations or injuries of the external ear or canal should, if possible, be corrected with little delay. Plastic surgery may correct a deformed or injured auricle and even atresia of the bony canal. Tumors and inflammations deserve attention. Impaction of cerumen and the presence of foreign bodies are important on account, not only of obstruction and disordered hearing, but of the local irritation and even ulceration which may ensue, the membrana tympani frequently suffering injuries. Eczema of the canal may be caused by otorrhea, but in some instances no local cause is apparent. Scratching the parts with objects like toothpicks and hairpins can only do harm. Early treatment can accomplish much in relieving this irritating affection.

The membrana tympani is sometimes the subject of direct violence by penetrating objects and may be ruptured by the impact of air produced by explosions, the slap of a hand, etc. The practice of boxing ears should be condemned on this account. Careful aseptic treatment after such an occurrence will promote healing and prevent infection of the middle ear. The ossicles and internal ear may also share in injuries to the membrana tympani.

In considering the diseases of the middle ear, one is justified in saying that nearly all of them originate in the nose and throat; and further, anything which prevents proper physiological breathing is very apt to be a contributing cause. Ciliated membrane containing mucous glands lines the nose, the Eustachian tube, and anterior part of the middle ear. From that point to the limits of the mastoid cells, the mucous glands are absent; in this respect resembling the lining of the accessory sinuses of the nose, which is virtually an endosteum. This may explain the vulnerability of the mastoid to infection.

In my experience I have usually found chronic rhinitis in its varied forms to be secondary to diseased faucial or pharyngeal tonsils, sinus disease, and exostoses and deviations of the septum. Disordered turbinates are often only symptomatic. Obstructive tonsils not only cause poor nasal breathing, but tend to perpetuate it through mouth breathing. When the mouth hangs open, muscular action is not such as to cause the oral and nasal bones to spread, which produces a narrow face with corresponding nasal fossæ and a deflected septum. Obstructive elements of any consequence affect proper breathing, and while one impaired breath counts for little, many may count for much. The vascular control in the mucous membranes becomes affected, and this in a short time brings about derangement of the mucous secretion associated with swelling. Finally, the so-called catarrhal inflammation becomes demonstrable with its various objective and subjective symptoms. When the nasopharyngeal membrane becomes disordered as described, pathogenic germs, which we always have with us, find an inviting field, and successive attacks of acute rhinitis occur, adding fuel to the chronic process. It can well be claimed that colds occur only when our nasal membranes are nonresistant, be it due to local or general causes. The Eustachian tube is virtually a part of the nasopharynx and is commonly involved when the previously described acute or chronic inflammatory lesions are present. This tube is but 1½ inches long, and its sides are almost in contact at one point. Instead of the middle ear being normally ventilated, with consequent suitable adjustment of the vibrating structures, a partial vacuum is created by the tubal obstruction, thus deranging the function of the entire ear.

It should be emphasized that a diseased faucial or pharyngeal tonsil, with or without the nasal changes to which I have alluded, frequently causes much chronic inflammatory change in the middle ear and tube, especially when adenoid tissue partly surrounds the tubal orifice.

Acute nonpurulent tubo-tympanic inflammation is very apt to complicate the ordinary cold, the symptoms being diminished hearing, a swollen stuffy feeling about the tubes and ears, possibly associated with tinnitus or slight pain. Such a process often becomes subacute, lasting for several weeks. Local and general treatment is of great importance, as each attack does some damage and may be one of the stepping stones to chronic deafness. Successive attacks should lead us to seek some local or general cause. In chronic nonpurulent tubo-tympanic disease hypertrophy, atrophy, calcification of the soft parts with ankylosis of the ossicles may occur, and owing to the inaccessibility of the parts, thorough success in treatment is unknown. I have already indicated the importance of intelligent nasal and pharyngeal surgery in the prevention and cure of ear disease. The term surgery is here used, as some corrective operation should not uncommonly precede local or general treatment. While I have nothing but commendation for the well-performed tonsil and adenoid operations in properly selected cases, I feel free to predict that within a few years otologists will be confronted with some more or less obscure and irremediable tubal disorders directly due to impaired action of the tensor palati and levator palati muscles which normally dilate and contract the tube in addition to aiding in speaking, swallowing, and breathing through their insertion in the velum palati. Reckless and inefficient operating, which is all too common, brings about actual muscular destruction, cicatrices, and contractures which are bound to affect physiological action. If every operator would take the trouble to study the fauces and pharyngeal vault of such cases subsequent to operation, he would frequently find conditions worthy of criticism, even though the operation had been well done.

It has been reported that nearly 25 per cent of the patients attending aural clinics are children under 14 years of age; of this number, 50 per cent are subjects of suppurative inflammation of the middle ear, and of this portion 10 per cent or more owe their origin to the exanthemata of childhood. Of the cases of deafness in the United States, 27 per cent are said to be due to suppurative middle-ear disease of childhood. After excluding measles and scarlatina, it has been estimated that 95 per cent of all discharging ears in children are due to adenoids, and in the fevers mentioned adenoids are usually predisposing causes.

Skillful attention early in the course of most of these affections would do much to conserve hearing. Many patients come to us too late, whereas a large majority could have been benefited and the disease arrested had they come before the development of permanent damage. Contributing causes should be treated early, and deafness, which is only a symptom, avoided. As much depends upon the actions of the patient as on those of the doctor. Cordial cooperation is necessary. Diet, hygiene, sanitation, personal habits, occupation, climate, and general health all have a vital direct or indirect bearing.

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## THE MEASUREMENT OF AUDITORY ACUITY.

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*(Journal of the American Medical Association, Sept. 27, 1913.)*

*Conclusions.*—From this general review of the chief methods of measuring auditory acuity, it is very evident that, as at present employed, they fall very short of the perfection greatly to be desired. They are both defective and deficient; no one of them is equal to all the demands of a complete acoumetry, and in what they attempt they are erroneous and easily lead to faulty interpretations.

The difficulties with which we have to contend are of two kinds—those which arise from the nature of the function being explored and others connected with the various tests themselves and the manner in which they are conducted.

Strictly speaking, we can not really measure auditory sensation at all, because it is not a quantity divisible into equal units. We arrive at estimation of the power circuitously, by measuring the energy employed in producing a given sensation, on the ground that auditory power is in inverse proportion to the intensity of the stimulus. We take as the criterion or standard of measure the lowest energy which we find is needed to produce just an appreciable perception of sound. This we call the liminal value, or, from the standpoint of the ear, the threshold of excitation.

As we are obliged to depend on the interpretation and response of the subject, results will vary with degrees of intelligence and especially of aptness and attention. In testing with speech, for example, in which case the apperceptive faculties play an important rôle, education, training, and environment greatly influence the response. Expectation and suggestion are psychologic factors which may vitiate the validity of tests otherwise carefully carried out, and in children it is necessary to eliminate as far as possible fear, nervousness, and anxiety.

In some recent experiments I have shown that the ear, by being continuously exposed to sounds, readily shows fatigue, which, of course, markedly lowers the threshold of excitation. This was found to occur with greater readiness with sounds at the two extremes of the trial scale, but especially with those of the upper limit. It has been proved that general fatigue of the body will lessen the acuity of the senses, including that of audition.

With regard to the tests themselves, there are many and various sources of error. These should be well understood and carefully borne in mind, if we would avoid the fallacies of too implicit faith in their accuracy and reliability. Of all the sources of error, the one which is most carefully to be guarded against is that of depending on distance as a reliable means of estimating sound intensity. In the first place, if there is a relation existing at all, it is not a simple one, as might be inferred from the common practice of expressing auditory acuity by a fraction in which the normal hearing distance is taken as a denominator and the distance at which it is heard as the numerator.

The fact is the intensity of sound diminishes with distance geometrically and not arithmetically. Suppose, therefore, a loud watch which can be heard normally at 100 inches is heard at only 40, individual hearing power is not correctly expressed as 40 per cent, but as 16 per cent; while if the patient hears at only 30 inches his hearing acuity, instead of being 30 per cent, is really reduced to 9 per cent. But, unfortunately, when distance is used as a means of arriving at the intensity of the stimulus, the law of geometric diminution is upset by other disturbing factors. The absorption and reflection of sound waves, the influence of extraneous noises, and the participation of the other ear in tests made with loud sounds, especially when the latter are of high pitch, may each, singly or jointly, upset all calculations. Errors flowing from such causes enter especially into the commonly employed tests made with the tuning fork, the watch, the acoumeter, and speech, and, therefore, seriously affect the validity of the results which are obtained.

The errors arising from the lack of a uniform initial intensity are encountered in those tests in which this is depended on. It is one of the drawbacks in the use of the human voice, the intensity of which can be only roughly gauged; and differs even with the choice of vowels and their arrangement, and also in the use of the tuning forks, whose intensity must be estimated by calculations that are complex and faulty. The presence of harmonics is a bad fault in many instruments used in acoumetry. They tend to cover the fundamental tones and so lead to erroneous conclusions.

Nearly all the tests which are in general use are open to the objection that they apply to only limited portions of the whole auditory field and can not therefore be regarded as giving a complete measure of auditory power. It is this that explains the observation which has been frequently made that a person may seem to have a good hearing for the watch and at the same time have great difficulty in hearing speech.

Tests used with the idea of covering a great part of the auditory field, including the upper and lower limits—the so-called qualitative tests—are often applied without regard to the function of intensity. As I have pointed out, the limits of sound perception might be extended and apparent hiatus disappear by merely employing greater intensity. It might be useful to know the amount of intensity necessary to get the threshold of excitation for different notes of the scale. A general survey of the subject of auditory mensuration leads to the inevitable conclusion that there is great need of a system that will meet the exacting requirements of otologic purposes.

The ideal instrument for testing audition, from an otologist's standpoint, would be one capable of producing all the notes of the scale, from the highest to the lowest, in pure tones free from harmonies and capable of giving these notes in intensities readily measurable and varying from a point below the threshold of excitation of the most sensitive hearing up to a degree necessary to awake sensation in persons suffering from the most profound deafness.

Moreover, in order that such an apparatus may deserve universal acceptance, it must be possible to construct as many others as are wanted of the same type, each constant for itself and precisely similar to the others. It is only then that we can hope to make it available for a uniform notation comparable among different observers.

## TEMPERAMENT IN CHILDREN.[1]

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(*Woman's Medical Journal, March, 1904.*)

In the first place, there is the sanguine temperament whose characteristic is rapid and easy responsiveness to all impressions and interests. This is the characteristic mood of childhood, which lives on in the temperament of the man or the woman who is something of everything and withal nothing much. The greatest strength of this temperament lies in its frank and ready receptivity and the promise therein contained of a pregnant contact with experience; but then it has its salient defects. It is wayward and infirm of purpose, with a terrible facility for skimming the surface of experience; it is incapable of devotion or even real affection, and, left to itself, will develop a butterfly emotionalism as its final type of existence. Such sanguine children, as they grow older, must be associated with those of more strenuous porpose; environed by those of a more intensive, purposeful temperament; their temperament must be deepened by struggle and self-denial; they must be convinced, not merely told, that something definite is expected of them; and in adolescence they must be yoked to more energetic colaborers, or enlisted in the active service of some great organization.

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[1] General title of article: "Tears, Tantrums, and Temperament."

Of the choleric temperament—the one next most characteristic to the moods of childhood—the keynotes are precipitancy and persistence. There is no danger to such a one of flightiness or pursuit—the very intensity of interest precludes that, even though the volatile nature favors a pitiful fragmentariness of accomplishment. The danger is rather one of developing an obstinate narrowness; of ultimately attaining to that limitation of character which marks the man who is driven through life by some impulsive coercive proclivity. Of all types of temperament, this is the most refractory to train, since it usually happens that, if the parent proposes, the child disposes otherwise. The choleric individual can be led, but never driven; but he can only be led if the leader is most careful and the leading string does not show. When some salient proclivity is pronounced, it may still be judiciously modified; or even if some counterproclivity be available and trainable, a total reversal of proclivities may be produced. The temperament is, after all, worth humoring, for it is probably by these individuals that the world's hardest work is done; but the mother who would guide a choleric child to gain the most from its temperament must walk warily and with a sure grasp of the facts that "you may lead a horse to water, but you can not make him drink," and that a ruling instinct will indubitably, under flat contradiction, become a ruling passion.

A very different picture is presented by the nervous type of temperament. Unlike the sanguine, it has not the openness of outlook nor the ready responsiveness to environment; but it dips into moods instead of skimming the surface, and has also a tendency to brood over the things which touch its sensitiveness, even to the point of morbidity. The depth of its interests compensates for its want of readiness and flexibility. Unlike the choleric temperament, it has not the precipitancy or volatility of the intense interests. Whatever the future that awaits it it will probably take life seriously, and it will be the very preoccupation with specific and definite interests and experiences which will hold the danger element for such a one. Because of this preoccupation many phases of life will pass by unnoticed; and because emotion, which should always be the prelude to expression, comes to be valued so much for its own sake that it quenches the practical impulses it should have vitalized, there is great danger that sentimentality will become the dominant characteristic. Such temperaments must be environed by energetic, active interests, by wholesome affections, broad outlook, and definite purpose in action.

The proverb states "that it is not a rearing but a dead horse that is hardest to drive," and so it appears that the phlegmatic temperament is the one which is truly the despair of the educator. This is probably the result of its marked stolidity and apparent unresponsiveness. The very slowness and deliberateness of thought and action argues a reserve of strength. If the nervous is the most refractory, this is the most aggravating; but, because of its virtue of steady contentment, individuals of this temperament may well quote Swain's verse:

"Content is a vessel not built for display,
Though she's ready and steady, come storm when it may."

Association with playmates of sanguine temperament is helpful—should be mutually so—but results must not be expected at once.

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## SOME FACTS RELATING TO THE HYGIENE OF NERVOUS CHILDREN.

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(*The Woman's Medical Journal, August, 1918.*)

To speak in broad terms there are two types of nervous children—the unrestrained, in which the emotional impulses are given sway, and the restrained emotional type. In the first class, the unrestrained type, the intellectual capacity is above the average as a rule. The marked essential features of this child are timidity and great restless energy. He is high-strung, discouraged on slight provocation, always looking for trouble, and worries over the most trivial matters, finds a great effort in meeting difficulties, very demonstrative and affectionate, etc., which is, however, due to selfishness. Such children demand sympathy and think that they are ill used if every one does not allow them to have their own way. They resent discipline and argue rather than obey. They are quick to learn, but forget facts easily. They are enthusiastic about their work, but lack judgment. They are sensitive and suffer agonies over trivial offenses. They work rapidly and energetically for a time, then are dull and lethargic, and meet failure in efforts of application. Sometimes these children have a keen sense of humor and are appreciative of the ludicrous, which is their salvation if they cultivate it. Some of these may be successful in art or literature in after life, but they frequently fail from lack of industry, application, and common sense. The sanitariums and psychopathic hospitals find many recruits from among this class. The physical and mental signs of this type of children are familiar to the medical profession.

In the second type the restrained emotions are very deeply felt, but the powers of control are equally strong. Such children are observant, intelligent, often so reserved and retiring that they often pass as being dull, stupid, and obstinate. They are highly sensitive, shy, and vain. They seem to lack in affection, but really long for it and brood over slights or seeming neglect. Being slow to become offended, they are often shamefully bullied at home or at school, but suffer all with the utmost indifference, except for periodic outbreaks of fury, in which they show a revengeful spirit. They are solitary in habits, imaginative, and introspective. They take life seriously and are wanting in a sense of humor. This characterological disposition, with its suppression of external display of emotions, is as exhaustive to the child as is that of the other type, in which the emotional energy is unrestrained, and it is associated with many similar complaints. For instance, they are lacking in self-control, and it is apt to lead to dreamy states and later to mental disorders.

We have also in addition to these two classes in which the intellectual faculties are above those of the average person another type. In this the intellect is by no means keen or even up to the normal standard, and such children are aware of the fact; but they have the ambition to succeed and are jealous of their associates who are endowed with superior intellectual powers. Frequently by faithful striving they manage to keep up with or excel their competitors, but the energy required for this is often too much for them—they break down physically as well as mentally, particularly if in after life they are given much responsibility in a position for which they know themselves to be unqualified. As a rule we find this class, although not always, among the female sex.

Parents and teachers may often be able to recognize and trace nervousness in children by the discovery of a deviation from the normal of one or more of the special senses—taste, smell, sight, hearing, or touch. For instance, hypersensitiveness to taste may be regarded as one of the earliest manifestations of a nervous child.

Hypersensitiveness to sound, with accompanying fear and shock occasioned thereby, is perhaps the most common of all indications of a nervous temperament in infants * * *. There is little doubt that dread of noises often accounts for timidity and lack of sociability in many nervous children.

Hypersensitiveness to common sensations of touch, pain, and temperature are also important signs which show an abnormal impressionability of the mind and body to external and internal influences.

We will next consider the subject of fear in nervous children. Children show a great variation in their individual susceptibility for fear. In former generations fear was considered necessary to morality, and a child who displayed timidity was treated by frightening him to make him courageous. Plato's method of testing children's courage was by exposing them to the horrors of witchcraft. Whether fear is caused by the supernatural or from physical ill usage or from ridicule, it has the same serious influence on the mental and physical health of children. Much of the self-consciousness, depressions, and obsessions which are often observed in adults may be traced to the effects of fear in childhood. In young children, when indications of hypersensitiveness to fear are observed, they should be met with kindness, sympathy, explanation, and removal of the cause where it is possible. This is of all the emotions the one that produces the most lasting effects upon the nervous system of a child. Oliver Wendell Holmes speaks of a glover's sign, in the shape of a huge hand, that hung in the streets of his home village, which in his early life terrified him night and day. We are all familiar to a more or less degree with the result of fright. An excessive timidity in a young child is one of the earliest indications of a nervousness to come. It is often shown by starts and outbreaks of crying and tremblings at the sights and sounds which only create amusement in normal children.

Nervous children are very imaginative, and they are often attracted to and influenced by the supernatural. The possible effects of certain forms of religious teaching and moral training upon nervous children need careful consideration, and from a medical point of view it is recommended that only the most cheerful, most soothing, and restful side of religious faiths should be taught to children who are by nature imaginative or inclined to be superstitious. Exaggerated statements of any kind, extreme and biased views on any subject—such as the evils of alcoholic stimulants, coffee, tea, and tobacco—are in a high degree injurious to nervous children; although I am sorry to state that many men and women of good professional reputation show poor judgment in advancing these facts. Excessive remorse for slight misdemeanors is sometimes a characterological anomaly in neurotic children. Thackeray describes his great mental agony for having spent fourpence of his parent's money for a lunch while on his way home from school, even though famished with hunger. How many of us can recall the suffering and contrition for some trifling offense in childhood.

Often children are delayed in their progress in school by their constant terror of a whipping or punishment of some sort. This means of discipline should certainly be condemned in the cases of emotional children—it may harm a child both mentally and physically. Neurotic children are, as a rule, keenly alive to their shortcomings, which are often numerous, and the mental worry they undergo is often greater than they can bear.

Often those who are in authority do an irreparable injury to nervous children by shouting their commands and instructions at them. This has no effect upon the ordinary boy, but shouting parents or teachers are unfit to control or instruct neurotic children.

At one time disciplinarians dealt with children who were ill-tempered, peevish, dishonest, quick-tempered, untruthful, pugnacious, spiteful, and in any way immoral; but now the medical profession is frequently requested for advice in helping to decide whether such children are abnormal or criminal. At present the tendency seems to be to regard any bad conduct as evidence of ill health, and often it is the case that after a severe or exhausting illness—as typhoid fever, measles, scarlet fever, etc.—nervous children who have been well trained and previously well conducted often seem to lose to some extent normal control and show moral indiscretions. But one will find in the majority of these cases that these lapses are transitory; that health and morality under good management are restored in time. Slight moral irregularities are frequently observed in boys and girls at the age of puberty, and may only be an indication of nervous instability, and should not always be looked upon too seriously. In all cases we must take into consideration the age, inheritance, and environment of the child, together with the nature of the lapses in the moral sphere, and then the child himself. It is said that a child of 3 has no moral sense; at 6 it shows some consideration for its associates; at 8 it should have some definite ideas of right and wrong. It is of the utmost importance to take into consideration the history of such neuroses as hysteria, epilepsy, alcoholism, and insanity existing in the ancestry in the case of moral delinquencies occurring in a child upward of 8, whatever its home training or environment may be.

We must also keep in mind the psychic effects upon a child where we find the parents dull and narrowminded, intellectual but emotionally unstable, indifferent, inattentive, apprehensive, and well-meaning, but fretful. Some parents we will find too strict or rigid in discipline; others are too lenient. Some show a lack of sympathy, while others are too sympathetic. In most cases, however, you can find an explanation of the child's ill health or misconduct in the character of its parents, teachers, or associates.

I shall further enumerate a few traits which may appear in the neurotic child; but at this point I wish to say that a nervous child is easily provoked by calling attention in public to its shortcomings, particularly when, as frequently is the case, it has made an effort to correct them.

(1) *Cruelty* in children, if persistent and induced by sheer delight in causing and witnessing pain, is evidence of a morbid neurosis. Neurotic subjects are sometimes fascinated by thoughts of pain and torture, and in some the sight of suffering produces a desire to cause it.

(2) *Fits of passion and fury* are very common in emotional children, and often call for medical advice. A baby that never cries is not always a healthy child. A husky, normal infant will cry with rage in order to make its wants known. It is only when children have come to a certain age, where they are expected to show some self-control, that fits of temper are considered morbid. Frequent outbreaks of violent temper are indications of nervous instability. Children vary greatly in their capacity for reacting to their emotions, and also in the degree of self-control to which they attain. Self-control may be cultivated in children by careful management, instruction, and display of judgment and common sense on the part of their parents and teachers.

(3) *Paroxysms of crying* without reason are very common in neurotic children. It is often unwise to seek for the cause of these episodic attacks. The children are usually aware that the cause is of little importance and not worth mentioning, and are ashamed of themselves for giving way to their emotions. If forced to give a reason, they will often prevaricate rather than be dubbed "cry baby," and thereby lead themselves into further trouble.

(4) *Jealousy in young children* is sometimes the cause of much unhappiness, but fortunately these cases are rare. An affection that is not reciprocated may be as upsetting to a child as to the adult; and if we regard the natural instinct of jealousy as indicating a malicious disposition not worthy of sympathy in a child, the foundation of viciousness, despair, sadness, and discontent may be sown with their depressing permanent effects upon the child's future health and happiness.

(5) *Dishonesty and untruthfulness* in children must be carefully considered. A child who steals apples or cakes is not necessarily a thief, nor does one lie make a liar. Timidity is frequently the cause of apparent untruthfulness. Some children have had the superior qualities of truthfulness so instilled into their young minds that they live in constant fear of telling a lie, and so, when the opportunity arises, they become frightened and say "no," when they really know they should answer in the affirmative. Others appear to falsify from absent-mindedness or because the question does not admit of a direct answer, although they are often too frightened to say so, and therefore seem to lie. These simple facts are important, for often a child may suffer greatly from a feeling that its word may not be believed.

(6) Much harm may be done by *teasing children* whenever they manifest an attraction for the opposite sex. The distressing shyness, blushing, and self-consciousness which is often observed in young people in company of members of the opposite sex may often be traced to this want of consideration by their elders for their infantile attachments. Freedom of social intercourse between sexes, under careful oversight, is advised, and especially the coeducation of sexes during school life is to the advantage of either sex.

In conclusion, just a word concerning *mental overstrain* as the result of educational overwork, for we can not lose sight of the fact that the results of emotional excitability can not be overlooked. Quite independent of the actual amount of study done, the fear of failing in his class work may in one case produce overstrain; in another, an actual ambition to excel his companions may lead by easy steps to exhausting emotions—such as jealousy, hate, and all uncharitableness toward his classmates—while in a third, disappointment on account of failing in success results in brain exhaustion. Girls are more liable to break down under such circumstances than boys.

## NERVOUS CHILDREN.

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*(Journal of Michigan State Medical Society, March, 1914.)*

In the majority of nervous children one is able to demonstrate a certain endogenous predisposition, the so-called psychopathic or neuropathic disposition. But in studying the personality of the father, or the mother and perhaps the several other children of the family, as well as the general environment of the child, the endogenous predisposition does not appear so prominent as a causative factor of nervousness. Many times the neuropathic disposition is an acquired complex of nervous manifestations, the result of environment. However this may be, it is true that the resistance of children to outside influences at the time of birth is just as variable as their external appearance. One child becomes easily nervous, another less so, a third under the most careful regulations is predestined to be a nervous child. Among the avoidable exogenous causes of nervous children are the mistakes of early training, involving the personality and situations created by those having this responsibility, in which the physician is frequently a prominent figure.

Faulty training of children begins immediately after birth. A child in the first days, weeks, and months of life requires a great deal of sleep, in the first week at least 20 hours in the 24, and for months after 16 hours. There are many conditions too numerous to mention here that prevent this, even in the best regulated homes, but all of them avoidable. At this time these outward influences are only reflex, since, as already mentioned, there are no psychic impressions at this period of life. Later the usual method of amusing the child is unquestionably harmful. The small child should be lonesome and not subjected to the stimulation arising from the implements we choose to call toys.

The overstimulated child, the unusual child, or the wonderful child, frequently is a nervous child. It is often pathetic to hear the mother boast that her child can read at 3 or 4 years or can produce melodies after hearing them for the first time. Such children are frequently more or less exhausted by the time they reach the school age and are not equal to the demands made upon their neural resources. When the problems of the school curriculum become more difficult, there appear periods of exhaustion, irritability, disturbed sleep, etc.

Corporal punishment in childhood is a barbaric method of training. It is no longer permissible in punishing criminals; why should it be tolerated in the training of children? The normal child may survive with an amiable disposition, while that of the nervous child is surely not improved by such treatment.

The desire for freedom is an early manifestation in the child's emotional sphere, and any forced restrictions will invariably produce reactions or resentment. When it is necessary to apply force, there is always an error of training or in the disposition of the parent. It is therefore unnatural and unfavorable for the physiologic development of the child to be surrounded by and compelled to follow severe regulations in the home or in the school. An equilibrium can be established only by carefully observing the reactions of the individual.

Of the greatest importance in this connection are the physical and psychic trauma which not infrequently arise as a result of this form of applied force. The effect of a physical trauma and also of the psychic, to a certain extent, is the same as in the adult, resulting in a pathologic reaction in any psycho-pathologic individual. The majority of cases of hysteria in adult life have their origin in this period and from this cause.

In grouping nervous conditions of childhood the writer has chosen the plan of Cramer, who collects the symptoms under four heads, as follows: Neurasthenia, endogenous nervousness, complicated endogenous nervousness, and hysteria.

### NEURASTHENIA.

In childhood, as in the adult, there is an exhaustion of the cortical nerve centers which occurs in children who are not necessarily of a neuropathic disposition, and is the result of strenuous mental effort without sufficient time for recuperation in rest and sleep, and which results in a chronic exhaustion of the brain centers. This type of disturbance undoubtedly forms the smallest number of nervous children. In 200 cases of nervousness observed by the writer there were but 19 that could be thus classified.

### ENDOGENOUS NERVOUSNESS.

This is a nervous exhaustion in a child with a marked neuropathic disposition and follows a moderate mental exertion in one who has the requisite amount of rest and sleep for a normal child. In other words, it has to do with a child with diminished resistance who has not the endurance of the normal child under normal conditions. This class was represented by 28 in 200 cases, the ages of the patients ranging from 6 to 13.

### COMPLICATED ENDOGENOUS NERVOUSNESS.

This form of nervous affection is due to physical ailments in predisposed children. In this class belong the intensely nervous, sensitive, excitable, irritable, restless child ever prone to habit spasms, nocturnal incontinence, etc., yet who may show no actual evidence of nerve exhaustion. Among the more common causes are enlarged tonsils and adenoids, eye defects, diseases of the skin, disorders of digestion, constipation, and incipient tuberculosis. In the writer's series there were 93 belonging to this class.

### HYSTERIA.

Here the child presents a marked neuropathic disposition which is most evident in hypersuggestibility, increased imaginative power, and inclination to lability and emotionalism. The physical stigmata are apparently not so numerous in childhood as in the adult. Anesthetic conjunctivæ are frequently met with, as well as areas of anesthesia and hyperesthesia. When these are demonstrated, they are sharply circumscribed and usually located on the back, thorax, and abdomen. Of the 200 cases recorded, 70 were classified as hysteria, the ages of the patients ranging between 4 and 14 years; 58 of these patients were girls.

Out of 200 cases of hysteria in the adult I was able to collect 173 cases that had their origin in a psychic trauma occurring between the ages of 4 and 10 years. In 90 per cent of the cases I was able to show a neuropathic disposition in one or both parents. In 200 cases of adult neurasthenia between the ages of 18 and 45 years there were but 12 per cent that gave a history of nervousness in childhood. In 42 per cent of all cases I was able to trace a neuropathic disposition in one or both parents. In all of the 12 per cent there was a history of nervousness in the parents.

### CONCLUSIONS.

The conclusions one may draw from the analysis of the 200 cases of nervous children are that neurasthenia, pure and simple, is not frequent in the earlier periods of childhood; it is not as a rule hereditary, and neurasthenia of adult life is not a persistence of childhood neurasthenia; the most common causative factor in childhood is mental overwork without the requisite periods of rest, owing to the patient's surroundings.

In cases of endogenous uncomplicated nervousness a marked neuropathic disposition is prevalent and no doubt is the hereditarily weak child which has diminished resistance and is unable to cope with the more strenuous mental life. This form is not observed until the school age is reached and continues in adult life to form the group known as nervous men and women, and possibly may also include the cases grouped under psychasthenia. Complicated endogenous nervousness is observed much earlier in the child, the youngest in the series being 1 year old. It is the most frequent form of nervousness in childhood and shows the importance of physical disease in the production of nervous disorders.

Hysteria in the adult is a persistence of the disease in childhood in the majority of cases. The disease itself is not hereditary, but may to a certain extent be dependent upon a predisposition, either acquired or hereditary.

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## NEUROTIC, PSYCHASTHENIC, AND HYSTERICAL CHILDREN.

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(*New York Medical Journal, June 6, 1914.*)

The treatment of any of these nervous conditions under consideration is a subject of great interest and of even greater difficulty, since every case must be handled individually and there can be only general rules to guide us.

*Preventive treatment* is to be first considered. In connection with this subject must necessarily be elaborated to some extent what has already been said in discussing etiology. From earliest infancy there should be caution against overexcitement and mental overstimulation of any sort. This applies to all infants, since no one can tell what nervous manifestations may develop later in young infants apparently entirely healthy; but it applies with especial force to those with nervous ancestry or who have themselves shown early neurotic manifestations. Abundant undisturbed sleep is of great importance. The presence in the house of a number of noisy older children is often a detriment in this respect; while many infants are kept up much too late in the day in order that father may see them;

and still others, especially the first-born of doting parents, are even awakened from sleep and perhaps brought downstairs to be exhibited to admiring friends. The baby suffers, too, from the constant desire of the parents and other relatives to have him evolve mentally in a manner superior to the babies of their acquaintances. This is all wrong. The infant should oftener be retarded than stimulated in his mental development.

As childhood is attained the same precautions must be taken not to strain the intellectual and emotional powers too greatly. Stories which are exciting should not be told to the child, and especially those containing elements which may be the cause of the develpoment of fear. Many of the old-time fairy and folk stories are very objectionable from this point of view. The beginning of school life requires careful supervision. Naturally, the child must be taught; but the teaching should, in my opinion, always be regarded as secondary to the maintaining of a healthy condition of the mind and body. The study hours are far too long for many children. In the case of those who learn quickly this does not apply, so far as the actual mental work is concerned; although the hours spent in school often take away too much from the time which should be occupied in play in the open air. With those, however, who find study somewhat of a burden, especially if they are of a neurotic disposition, too much school work is often the cause of the development of nervous symptoms of some sort.

A very important matter is the avoidance of too constant association of infants or children with excitable or nervous relatives, especially parents or older brothers or sisters. The entire household life is too strenuous for them; while the observation by the child of uncontrolled nervous or other exhibitions on the part of the parents is distinctly harmful. On the other hand, nothing is more productive of nervous peculiarities than the too careful rearing of an only child in association only with older persons. Often nothing is better for a "peculiar" child than having its rough corners polished off by mingling with playmates. The ruthless criticisms of these will often undo to some extent the evil influence of the too affectionate and considerate parents.

All that has just been said applies with increased force where infants or children have already decided nervous manifestations. In addition, other measures must be taken to bring about a cure. In the first place among these, the general health of the patient must be carefully studied, and treatment commenced if necessary—as it nearly always is. Anemia and debility are to be corrected, and especial attention is to be given to the digestive apparatus. In my own experience the neurotic and psychopathic states are most frequently associated with some digestive disturbance, whether this is the cause or the accompaniment; and the successful treatment of this condition will often be followed by amelioration in or a disappearance of the nervous manifestations. This was true in a number of the cases I have detailed. Other possible causes for the disturbance of the nervous system must be carefully sought for, prominent among these being the constant association with other nervous members of the household. It is here that the mingling with healthy children as playmates, after infancy is passed, is especially to be insisted upon. There are cases, however, where shyness, timidity, or morbidness render the teasing of other children harmful, and the patient must then be entertained in other ways. This is a matter to be determined for the individual case. Complete change of scene and climate, with separation from the family, under the care of a specially trained nurse, and under medical supervision, will often work wonders in nervous children; and in severer cases, as in psychasthenia and hysteria, this is often one of the best means of cure. In many such cases among the poorer classes the placing of a child in a hospital is frequently the best possible procedure, as some of my cases illustrate.

One of the things most harmful for nervous children is the evident and openly shown anxiety of parents. There can scarcely be any more deleterious suggestive influence for evil than the so common practice of mothers of detailing to the physician or to friends all of the child's peculiarities in the presence of the child itself. I have repeatedly sent such children out of the room in order that they should not hear the account given by the mother. Often the question of attendance at school arises. This, too, is an individual matter. Over against the mental and bodily fatigue of school life is to be placed the fact that absence from school may draw still more the attention of the child to its condition, at the same time that it takes away occupation, inasmuch as there are often no play companions to be had during school hours.

I may reiterate the chief principles which constitute the basis of all treatment, especially for the severer cases, such as the psychasthenic and hysterical states. While the general health is being improved and all visible causes removed, the direct object of all other measures is to make the child *forget*. This is slow of action, but satisfactory in result. Absolutely no anxiety of any sort must be shown by the parents or others with regard to any of the hysterical or other manifestations, or remarks of any sort made regarding them. Seeing the parents indifferent the child soon learns that the condition is a harmless one. It learns, too, that it can no longer enjoy the pleasures of sympathy or be the occupant of the center of the stage. Separation from anxious parents is almost a necessity in such cases, since the majority of parents can not sufficiently control the exhibition of their feelings. The nurse in charge must always be kind, and must obtain the affection and full confidence of the child; but there must always be firmness and an apparent indifference to the symptoms. This applies equally well to the physician. The symptoms, if noticed at all, are to be made light of, as something which is sure to pass away soon, and encouragement of every sort must be given. Suggestive treatment may be employed in the form of insisting that the patient is better. In fact, suggestion in some form is of the greatest value, by the employment of mechanical or other devices which seem strange or wonderful to the patient; combining this with the assurance that recovery will surely follow. Usually it is better not to express the belief that the malady will quickly disappear, but only little by little. It is also important that any treatment employed be directed against some other region of the body than that showing symptoms, otherwise the mind of the child will continue to be directed to these.

Punishment does no good in most cases of this kind, and only destroys the confidence and affection of the child, which is so necessary in order to obtain good results.

I have said nothing regarding the administration of drugs for any of the nervous diseases described. They occupy but a very minor position and are to be employed only to relieve certain urgent symptoms. This does not apply to the remedies needed to improve the geneal health in any particular.

It is always to be remembered that in all of these diseases there is the underlying nervous disposition which can not be entirely removed. Consequently, when apparent recovery has taken place, care must still be observed that no causes are allowed to operate which can be the occasion for a return of the nervous manifestations. Nevertheless, it is encouraging to observe that with care many nervous children seem to outgrow the neurotic tendency entirely.

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## SOME OBSERVATIONS ON THE CONDITIONS AND TREATMENT OF STUTTERING.

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(*Boston Medical and Surgical Journal, Dec. 4, 1913.*)

One of the most baffling features of [stuttering] cases is that no two are similar; for this reason a successful method of treatment must be adapted to the individual, and this perhaps explains some of the failures of those systems where patients are treated in groups, without reference to their special needs, or where the same treatment is applied to every case, whether it fits the needs or not.

Undoubtedly where some degree of impediment has been present since first learning to talk the cause lies in some cerebral predisposition, yet also in cases where the commencement of the trouble can be assigned to a definite later date and is associated with some such event as a fright, illness, or fall, the primary cause still must be sought in a mental or nervous condition, perhaps latent until then, or perhaps brought about then for the first time. In other words, the character of the impediment as it becomes recognizable to the listener, whether it be a contortion, a repetition of sounds, prolonged silence, or whatever it may be, is the effect and not the cause of the trouble. Yet, as will be shown later, excellent curative results may sometimes be obtained from directing the attention to exercises for the relief of the physiological bad effect.

However, though the underlying cause be cerebral, the longer the patient, in order to speak, goes through struggles without knowledge of the normal muscular and respiratory processes involved in articulation, the more his bad physiological habits become involuntary and reflex. If his impediment takes the form of noticeable and more or less violent contortion, as of the jaw, lips, eyes, tongue, head, etc., the longer it goes on the more this in itself reacts on his mental and nervous condition. Therefore, what may have originally been a mere tendency to wrong cerebral direction of the articulatory process, or a slight upset of the efferent impulses, becomes a fixed improper habit, correspondingly difficult to overcome, and spreading until its effects attack the will and even the personality itself.

On the basis of this explanation it will be seen that no method of treatment can be considered well balanced which does not include both the psychic and the physiological. But these overlap and frequently some exercise obviously in one sphere will have effects in the other. For example, if a person's confidence in himself can be increased by suggestion, he will without doing muscular exercises for the purpose probably stand straighter, breathe deeper, and be on the whole better fitted physically to articulate correctly than if he is embarrassed, despondent, sullen, or self-deprecatory. In the same way, if as a result of doing some purely muscular or tonal exercise, a person is enabled to speak easily where previously he had difficulty, his spirits will rise, his confidence increase, and the desirable psychic effects be obtained without a direct word on the subject.

A satisfactory method of treatment must take into consideration the complicated nature of the speech process: It is dependent on quantity and placing of breath, muscular processes of the trunk during the emission of breath, muscular processes in the throat and larynx governing the quality, pitch, and volume of tone, and finally on the muscular processes governing the position of the articulatory organs above the larynx, the pharynx, palate, tongue, lips, and jaw. It is easily seen that in a process so involved there is infinite opportunity for the formation of improper habits; the lack of right use of one set of muscles immediately throws undue strain on some other set, which then overwork in the effort to accomplish some part of sound production they were never intended to perform.

On the physiological side, then, treatment must recognize these elements: The teaching of correct breathing, the correction of habits, of muscular over-rigidity in any of the sets of muscles concerned, a thorough study of phonetics, and the cultivation of proper laryngeal action to secure flexibility and flow of tone. Probably every intelligent and honest method devises similar exercises based on these four elements of voice production.

It is sometimes enough to call the attention of the patient to the necessity for inhalation before speaking. Frequently the effect of his nervousness is to make an inhalation impossible because of throat, chest, and intercostal rigidity; with other patients the instruction to inhale results in filling only the upper part of the lungs and in consequent contraction of the shoulder and neck muscles, but none at all of the diaphragm and abdominal muscles, which are the important ones for breath control both in inhalation and exhalation. Therefore, some attention to the placing of breath and the quantity taken is essential if the patient's difficulty chances to depend even partially upon lack of breath or incorrect breathing, which is often, but not always, the case. Most patients when they are told to take a breath close the mouth and inhale through the nose. This necessitates a change of position of the soft palate and back of tongue before speaking can begin; therefore, the tendency after such inhalation is to make a nasal exhalation, and this is a fatal hindrance to speech, which requires exhalation through the mouth. Of course it must be pointed out to the patient that ordinary, quiet respiration should be nasal—mouth breathing used only for speaking.

Experimentation with voice production in singing has convinced me that the teaching of bodily expansion with contraction of the diaphragm during inhalation and the consequent filling of the lower lungs with air constitutes the best breathing method for support and control of tone. The application of this is as important in the removal of speech defects as in the cultivation of a singing voice. It is easy to teach, and it relieves rigidity of upper muscles which should not be used at all, in the slight inhalation and exhalation needed for ordinary speaking; repeatedly patients who complain of feeling a tightness or hardness in the chest or lower, during the effort to speak, sometimes amounting to actual pain, have entirely lost these accompaniments of their difficulty after mastering the habit of diaphragmatic breathing. Exercises for this purpose, together with specific relaxing exercises, usually are of great benefit, but are not needed in all cases.

Nearly always the tone of the stutterer's voice is very poor, being either noticeably weak or of a low pitch expressive of depression, or very monotonous. This means that the action of the vocal cords is not as it should be. Frequently they get no chance to act normally because of the too great effort made with the extrinsic muscles of the larynx, or because of some contortion habit by which an effort is made to substitute the use of the voluntary muscles of the jaw or tongue for the involuntary ones of the larynx. As a remedy for this, exercises in the relaxation of the throat, jaw, and tongue are extremely helpful. In the attempt to develop flexibility I find the musical ear of the patient is of great importance; stuttering is frequently associated with a remarkable degree of tone deafness. In such cases directing the attention to change of pitch does no good.

There remains the teaching of correct position for different sounds. This is extremely important in many cases, of no assistance in some where the sounds are always made correctly if at all, and the cause of trouble is elsewhere; but this sort of training alone rarely accomplishes a cure in mature cases. It is, however, of the greatest value with young children. Since the study of phonetics has made such work familiar, there is no necessity of dwelling on it in further detail here.

The recultivation of the ear is of the greatest importance, not only in making a cure of stuttering, but in insuring the permanence of cure. The average stutterer does not hear his own voice as it is. He must be trained to listen to the normal speaking voice of others and contrast it with his own, to apprehend what the easy flow of one word to another means in sound as well as in breadth and muscle sensation. It is extremely helpful in assisting easy "beginning," so often the greatest stumbling block to a stutterer, to develop in him the power to make an absolutely clear mental concept of an easily and correctly produced vowel sound. To be effective this mind picture must be accompanied by muscular sensation in the throat, which he practices until perfect familiarity is assured and the ability to call up that sensation at any time results. For example, a stutterer will be perfectly able to say any vowel easily and correctly, but the moment a consonant is placed before the vowel, there is a change in the pharyngeal action and the vowel perhaps can not be spoken at all or comes out after a time spasmodically with no ease or right quality of tone. The patient must first be taught the distinction between vowel or pure tone, depending on the action of the vocal cords primarily, and the articulatory processes which give consonants and break up the pure tone into words. This done, a beneficial exercise is to have him speak a vowel aloud, directing his attention to the throat sensation, possibly even placing his fingers on his throat to feel not only the vibration but the muscular movement accompanying the sound. Then he speaks aloud a word containing this vowel. For example, "a, bake." He then *thinks* the vowel, still directing attention to the muscular throat action, but stopping short of audible sound, and only calling up the sounds mentally with all possible vividness. He then again speaks the complete word aloud.

General training and the study of language structure, too, is helpful at times. Some stutterers fail to realize how they break up language, chopping and chipping their speech until only two or three words are jerked out at a time. This is, of course, due to incorrect muscular action rather than to incorrect thought, but by analysis of their sentences as they speak them, they can be made to see how certain words in a group belong together, and how there are natural and legitimate places to pause, as well as unnatural and illegitimate. This new focus of attention on grammatical or rhetorical structure relieves the fear of isolated words and brings the patient to expecting more of himself.

There remains the purely psychic side of the treatment. Inculcation of right habits of thought, the doing away of mental hesitation, both with regard to thought itself, and the choice of words for its expression, the training of the attention and the will, the establishing of a better attitude on the part of the individual toward himself, others, and his evironment. It is obvious that in this sphere particularly much depends upon the natural endowment of the patient. It is also essential not to try to work with more than one idea at a time. Multiplicity of exercise is dangerous. One may advise a number of exercises as a home practice, and during the treatments one may try by suggestion to bring about several desirable mental changes, but in outlining a mental attitude for the patient to assume when the necessity for speaking arises, it is well to select one idea and insist that the whole mind be given to that; it is a good plan to vary the idea from time to time, depending on the extent to which it seems to have become habitual, and the amount of benefit derived in its being persisted in.

The gaining of the confidence of the patient is also very necessary, as is the awakening of confidence in himself. For certainty and permanence of cure, it is essential that the patient should thoroughly understand the object of all exercises given, see why they have beneficial results, and reach the conviction that the matter is in his own hands if he is sufficiently faithful and determined.

It is obvious that in work requiring the formation of new habits the oftener treatment is given, especially at first, and the longer each treatment is, up to the point where fatigue makes concentration and attention impossible, the better are the results obtained, and the quicker. The importance of the psychic side of treatment for a disorder primarily psychic is evident. It is quite possible to make actual and permanent cures in five weeks, even of cases which appear extreme; it is also quite possible that work will have to be kept up for months, perhaps for years, before there is sufficient improvement to call it a cure. Cases are very likely to improve rapidly at first and then either go backward or remain stationary for some time. It is then that the most care is needed to maintain confidence and choose the most helpful exercises.

The question of what to say to a patient regarding the time the cure will take is a delicate one. If one states at the outset that the time will be indefinitely long, there is great discouragement and perhaps insufficient determination even to give the treatment a trial. Therefore the maximum amount of confidence to aid in commencing the work is not secured. On the other hand, the bad effects of unfulfilled promises are deplorable. If a cure is promised in a rash moment and not brought about in the specified length of time, the patient will relapse, so that his "last state is worse than his first."

But as the common experience among honest experiments in this field is that more than 50 per cent of cases are curable and nearly 50 per cent more capable of much improvement, one can, by taking pains, reach a conclusion as to how best to present the requirements of treatment to a stutterer, so as to do what is half the battle from start to finish, namely, establish and retain his confidence in the method, in the teacher, and in himself.

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## A STUDY OF 1,000 CASES OF STAMMERING, WITH SPECIAL REFERENCE TO THE ETIOLOGY AND TREATMENT OF THE AFFECTION.

G. HUDSON MAKUEN, M. D.

(*The Therapeutic Gazette, June, 1914.*)

The age of the patients at the time of consultation was from 2½ to 53 years, the average being about 15.

The affection usually begins during the first few years of the developmental speech period, or to be more precise, it begins during the period of transition between the child's more or less meaningless jumble of words and his attempts to make accurate use of them as a means for the expression of thought and feeling. This period is that which comes between the ages of 2 and 4 or 5, the exact time depending upon the state of the child's psychophysical development. It is rare for the affection to begin after puberty, for by that time the speech habits have become more or less fixed; but we have one patient who had no difficulty up to his 23d year, when the stammering began to manifest itself.

Of the 1,050 cases of stammering, 77 per cent were males and 23 per cent were females. This shows a greater proportion of females than statistics usually give. In my report of 200 cases, published in 1897, only 5 per cent were females. The high percentage here given may be due to the fact that clinic cases come largely from the working classes, and girls have more leisure and greater opportunities for taking up the task of seeking relief. However that may be, the affection is undoubtedly less prevalent in females than in males, and the reasons given for the difference have been many and varied, the chief one, I think, being the greater natural aptitude of females for all work requiring the finer coordination of muscles.

That stammering usually occurs in those exhibiting a somewhat characteristic temperament must be apparent to all who have made a careful study of the affection. Whether or not the temperamental peculiarities, however, are the cause or the result of the affection is another and more difficult question. As a rule, stammerers are emotional, sensitive, hesitating, evasive, and oftentimes cowardly.

Eighty-five per cent of the cases were of average mentality, and we have had few, if any, who might be regarded as being above the average; about 14 per cent were a little below the average mentality, and only about 1 per cent were far below the average. Thus it appears that stammering is of rare occurrence among those of feeble mind, a certain degree of intellectuality being necessary for the full development of the affection.

The fact that about four-fifths of all stammerers are of average mentality and that only about one-fifth are below the average is worthy of note, and I would explain it on the theory that those who are mentally alert are under greater phonatory and articulatory stress. In other words, they have more to say and they feel more the importance of saying it than those in the lower grades of mentality.

The general health of stammerers is usually somewhat below par. Faulty breathing and spasmodic attempts at phonation and articulation combine to interfere with normal physical development. The acute infectious diseases, such as whooping cough, measles, scarlet fever, diphtheria, and smallpox, are all important etiological factors in the affection. Moreover, stammerers are generally nervous and excitable, and they exhibit marked neurotic tendencies.

Thirty-nine per cent of my patients admitted having or having had relatives who stammered, and this percentage is probably too low, because there is always a tendency to conceal the facts in matters of this sort, and because stammering probably existed in some of the families without the knowledge of the patients.

Stammering is an affection that develops with the development of the speech of the individual, and it develops chiefly in those children who have inherited, or it may be acquired, the physical anomalies which make the development of the affection possible or even probable. These anomalous cerebral conditions which give rise to stammering may be transmitted from parents who themselves may not have stammered, but who possessed all the cortical conditions which usually result in the affection and only escaped it through more favorable environmental surroundings.

Association and imitation, however, must be reckoned with in studying the etiology of stammering, and especially since they help to determine the character of the affection and thus suggest certain variations in the treatment indicated in individual cases. Thirty-two per cent of my patients confessed to have associated with others similarly afflicted, but in the majority of instances this association was with others in the family who, together with the patients, may have inherited the conditions which made the affection possible, or who were themselves blood relatives from whom they may be said to have inherited the affection.

Inasmuch as over 28 per cent of my patients date the origin of the affection from the instant of having received a nervous shock, I think that we must give this a conspicuous place in the list of the causal factors of stammering. There is probably no human faculty that is so much influenced by nervous or emotional conditions as the faculty of speech.

Although no very careful studies of the ocular conditions were made, we found 26 per cent had faulty vision, owing chiefly to a defective action of the muscles.

Only about 3 per cent had subnormal hearing, and this seemed to be purely accidental and in no respect related to the affection.

No less than 97 per cent of my stammerers complained of some nose or throat trouble, and so great was it in 36.8 per cent of them that operations were performed for their relief.

## TREATMENT.

From what has been said you will readily understand that the treatment of stammering is more psychological than physiological, and yet the psychical causes of stammering can only be reached and removed through the physical activities of the individual. The only way that one can learn to do things is by doing them, and the only way that a child can learn to talk freely and unhesitatingly is by talking freely and unhesitatingly, and when he can not do this, as is always the case with the untaught stammerer, he must be shown how to do it. This is the work of the teacher, but in order that the teacher may be able to do it successfully, he must himself be skilled, not only in the art of speech, but also in the art of teaching speech culture. The successful treatment of stammering aims not to correct a defect of speech, but to establish good speech; not to graft something upon an old trunk, but to plant a new tree, and to encourage its growth. In other words, the treatment of stammering has for its purpose primarily the reeducation of the cerebral speech mechanism, and this reeducation must be brought about largely through the accurate physiological use of the peripheral mechanisms of speech. The physical exercises must be selected and adapted to meet the needs of each individual patient, and they must be practiced by the patient, not aimlessly, but with close attention and with what some one has called "purposeful intent." The chief purpose of the practice should be the establishment of normal mental imagery, for upon the accuracy of the mental imagery depends the accuracy of speech. Just as one may by practice strengthen and develop his visual imagery and thus increase his powers of observation, so may the stammerer develop and strengthen his auditory imagery, and thus overcome his difficulties of speech.

The stammerer must learn to idealize speech just as the singer learns to idealize song. "As a man thinketh, so is he," is a phrase that suggests the condition of the stammerer. If he thinks stammering speech he will necessarily use stammering speech. His condition is like that of a novice on a bicycle who sees a stone ahead. If he sees it clearly enough and to the exclusion of other things, he will surely hit it. On account of his past experiences the stammerer sees nothing but trouble ahead, and the fear of this trouble amounts in some instances to a veritable obsession, paralyzing all normal effort. Accurate mental imagery under such conditions is a practical impossibility, and we must help the patient to remove the mental confusion arising from his fear of trouble before any satisfactory progress can be made. When the stammerer has acquired an adequate knowledge of the nature of his difficulties, he is then in a position to learn how to redintegrate and strengthen the mental imagery upon which good speech depends.

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## PSYCHOGENIC EPIDEMICS IN SCHOOLS.[1]

AUGUST STRAUCH, M. D., Chicago, Ill.

(*Medical Record, Jan. 17, 1914.*)

Psychogenic institution epidemics appear at the present time, rather than the great psychic epidemics of the Middle Ages, which were principally of religious origin. The number of these imitation epidemics in educational or other institutions, especially in girls' boarding schools, hospitals, and prisons, is perhaps greater than is generally believed, since it is to the interest of these institutions to prevent such occurrences from becoming generally known.

The cases in the hospital at Haarlem are much quoted, where an epileptic by his seizures through imitation transmitted his convulsions to all the other patients. Van Swieten observed spasms, from which small children suffered, mimicked by all those who were unfortunate enough to be witnesses. Palmer, in 1892, observed in a girls' school in Biberach (Germany) about 13 children from 11 to 13 years of age who all manifested sleeplike conditions. Rembold, in 1893, reported a psychic epidemic in a girls' school at Stuttgart. After a girl had fainted, 25 cases of nervous disturbances occurred; 15 girls were affected with tremor and screaming; 10 with unconsciousness and sleeplike states. Hirt, in 1893, reported that 20 girls among 48 between 5 and 12 years of age were taken ill with hysterical spasms and disturbances of the sensorium, near Lignitz, in Germany, in the village school of Gross Tinz. Szegoe observed at Budapest in 1895 a singular cough prevalent in a girls' institution (chorea laryngis). Bokay witnessed a very unique and spectacular psychic epidemic in a girls' school near Budapest. Fifteen girls between 9 and 15 years of age who were affected imitated the cries of various animals by peculiar expiratory sounds. A pupil, who had previously suffered from catarrhal cough, suddenly had an expiration that resembled the sneezing of a horse. Soon after two other pupils produced also peculiar expirations, which, however, sounded more like barking. Still other girls reproduced the hissing of geese, the shrieking of parrots, the neighing of horses; the majority, however, imitated the barking of dogs. Whenever one girl started, the rest apparently had to join in, thereby creating a confusion of noises as if "from the animals of a menagerie." Bokay excluded intentional imitation. Von Holwede described an epidemic of light attacks of spasms with sleeplike states in a high school in Braunschweig.

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[1] General title of article (with bibliography): "Disorders in Children by Imitation and Induction."

Singultus is not infrequently marked by its epidemic spread. In 1897, when I was still in Vienna as a medical student, there occurred an epidemic of hysterical singultus in a class of a girls' school in the second district, in which 28 girls among 35 were victims, so that the class had to be closed. Dr. Bercach, who has reported this imitation epidemic, in addition to this made a similar observation in another school, in which 20 girls among 30 were affected. Schuette describes the occurrence of "trembling disease" in a girls' school at Meissen.

Unique and very interesting were the observations made by Schoedel of a peculiar disturbance of handwriting that spread among the children of a class in a public school in Chemnitz, 21 of the 35 pupils being affected. During the first days of the disturbance the children, girls and boys, would write well at the beginning of their lessons, but gradually in the course of an hour the handwriting became more and more tremulous. During the following days the characters and figures were tremulous even at the beginning of the lesson and became finally very grotesque and unreadable. This peculiar ataxia of the hand and arm movements appeared only in writing, not in other kinds of work. There were no signs of nervousness, exhaustion, or excitement present. Shortly before the outbreak of this epidemic the daily newspaper published repeatedly articles about a school epidemic of trembling disease in Meïssen, where 134 children, mostly girls, were unable to hold any light object, such as a penholder, during the attack. It was proved that the first patient in Chemnitz had heard of this epidemic. In the opinion of Schoedel, this example and the suggestion of the teacher in expressing to his pupils the hope that they might be spared the trembling disease of Meissen served actually as the provoking agent of the epidemic in Chemnitz. In this case the children imitated the peculiar disturbance of the writing of their near neighbors. Schoedel is averse to classifying this or similar psychic epidemics among the manifestations of hysteria, as some authors do, because it dealt mostly with well nourished, healthy, not neuropathic children, of average education and healthy parentage and for other very plausible reasons. He applies to these phenomena the unprejudiced term "induction or imitation diseases." Certainly such conclusions must be approved for a great number of psychic epidemics, though in others hysteria, as the underlying factor, is too conspicuous to be denied.

It is the physiological underdevelopment of the child's psychic organ with its great tendency to imitate and the impressionability of mind and the vivid imagination that render such epidemics possible. A real disease is not necessarily a factor, as idiosyncrasies and aberrations may be imitated. Girls are possessed of these childish characteristics in a more pronounced degree than boys and enjoy more leniency, and this factor is apt to aggravate such evils.

When children, in aping instinctively the bad habits of adults, suddenly exhibit the morbid manifestations seen in others, we must not always necessarily presume an abnormally increased imitative tendency, a morbid impressionability; in such cases the milieu may be sufficiently influential to affect the child. Finally, we must remember that a certain theatrical talent exists in the normal child, which becomes evident in their play; undoubtedly this may aid at least in inducing the children to copy and ape others, including abnormal persons, especially if their desire is directed toward "playing a rôle." The more conspicuous the feature of the example, the more will the instinct of mimicry in the child be aroused.

I shall only cursorily point to the occurrence of enuresis nocturna in previously healthy children as due to psychic contagion by unconscious imitation of classmates and friends who are afflicted with this disturbance. Also the so-called school headaches, which as a rule are of neurasthenic nature, seem to be due to hysterical imitation and suggestion in a number of cases. Thiemich, as school physician, relates the experience that in some classes one-third or more of the pupils, mostly girls, between 10 and 14 years of age, upon inquiry asserted that they suffered from headaches, while in other classes with the same number of pupils of the same age only sporadic cases were present. A suggestive therapy with tinctura amara was generally followed by speedy and permanent cure, though the neurasthenic forms remained uninfluenced. Thus we see that these epidemics present an endless variety of symptoms, and we realize that the phenomena are too many to enumerate. One feature is common to all of them—psychic contagion in a limited circle of children who spend many hours together and are more or less embraced by the same bonds, as in schools or other institutions.

## INVESTIGATION OF 100 CASES OF CHOREA.

ARTHUR NEWLIN, M. D., Philadelphia.

(*Pennsylvania Medical Journal, June, 1914.*)

The new cases applying to the dispensary of the Philadelphia Orthopedic Hospital and Infirmary for Nervous Diseases during the year of 1910 were selected and the services of a special social worker were obtained through the social-service department of the hospital. The year 1910 was chosen as being not so distant as to make it difficult to trace patients to their homes and yet distant enough to note the existence of recent recurrences.

Of these 100 cases, 69 per cent were Americans, the other 31 cases being fairly evenly distributed among Irish Americans, Russian Jews, English Americans, etc. The female sex predominated, 63 females and 37 males being enrolled. The majority were between the ages of 5 and 15 years, there being little difference in the distribution in two-year intervals between these ages. The average duration of the attacks was from one to six months, 34 out of 87 cases, where accurate records were obtainable, lasting from one to three months. The month of onset was interesting in that there was only a fair proportion beginning in the spring months; that is, 28 in March, April, and May; during the summer an equal number began, and in the last three months of the year there were also 28 cases beginning in that period. In only five instances was there evidence that shock or fright was the casual factor in the beginning of the attacks. As far as association with diseases in the parents is concerned, it was noted that rheumatism headed the list, there being histories of that disease in 40 of the parents, in 21 evidence of functional nervous disorders, while 15 gave histories of tuberculosis. In 15 of the 100 families there was the existence of chorea in other members than the patient. In 13 instances alcoholism was recorded in one or other of the parents. As far as the previous health of these patients was concerned, it was found that outside of measles, chicken pox, and whooping cough, tonsillar troubles were the most frequent disorders recorded. There were 62 instances of tonsillar disease, of which tonsillitis comprised 24, hypertrophied tonsils 20, and in 18 the tonsils had been removed. In 25 cases there was a definite history of rheumatism and in 12 there were histories of joint affections that were ascribed to rheumatism and suggested that disease. In 39 instances ocular defects were noted; the majority of these had been ordered, but were not wearing, glasses. In only 6 instances was there history of heart disease.

On investigating the environment of these cases it was found that the class of patients affected with chorea seemed to be rather above the average dispensary case as far as social status was concerned; there were very few instances of extreme poverty, 90 per cent being above the poverty line. The neighborhood was almost always fairly good, in many instances noisy, but sanitary and not congested. In the homes this also held true; 80 per cent were in good condition, underdrained, orderly, and well ventilated. As far as the hygiene of sleeping apartments was concerned it was found that there was but little overcrowding; 27 had rooms to themselves; in 58 instances there were two in a room, and in only 10 cases three in one room. The ventilation was bad in 18 per cent; the hours of sleep were too short in 43 per cent. The investigation of the question of feeding showed that in 15 per cent there was gross, general deficiency, and in 61 per cent there was overindulgence in tea, coffee, and sweets, this in spite of the fact that these patients had been instructed in the evils of this kind of diet. In the matter of amusements there was evidence of gross neglect of instruction, 50 per cent of the children were allowed to go out at night, either playing in the streets, or, as in 48 out of the 50, they were permitted to go to cheap evening vaudeville shows or to moving pictures. In only 15 instances was there actual evidence of the home discipline being an important factor in the continuance of the choreic attacks. The investigation of the schools attended by these patients showed a satisfactory state as far as could be judged. In only one instance could an attack of chorea be traced to overcrowding in the schoolroom, and the standing and conduct of the patients were almost uniformly reported as good, although in many instances there was considerable loss of time from school on account of the disease. The same can be said of the places of employment of the patients who had left school to earn their own living.

Of the 100 cases, 52 had more than one attack. In 30 cases there was one recurrence; in 15, two; in 4, three; in 2 cases, four; and one patient had six separate attacks. The intervals between the recurrences were as a rule from one to two years; in 15 instances one, and in 21 two years elapsed between the primary attack and the first recurrence. In 10 cases one year elapsed between the first and second recurrence, and in 7 cases two years elapsed between the second and third attacks. Although there were seven primary attacks beginning in January, there was no recurrence amongst any of these cases. The spring months being slightly the favorite time for recurrences, 26 secondary attacks occurred in that time, 20 occurred during the summer, and 15 during the last three months of the year, September and February being unfavorable months both for the occurrence of primary attacks and recurrences. The duration of the recurrences corresponded in the main with that of the original attacks; of the 82 recurrences 50 lasted from one to four months. In 22 instances the parts affected in the recurrences were similar to those involved in the primary attacks, in 13 there was a complete dissimilarity, and in the remaining 17 there was partial involvement of the members originally affected. In analyzing the home conditions affecting these patients who suffered with more than one attack of chorea, it was found that there was simply an exaggeration of the bad factors found in the case of the primary affection. In 31 out of the 52 cases the children were improperly fed and in these the over-indulgence of tea, coffee, and sweets was marked. In the matter of diversions, the "movies" here played a more pronounced rôle than ever. In 38 instances out of the 52 cases the patients not only attended these amusements, but almost always at night and in the majority of instances several times a week.

In review it seems that the most important aid that the social worker can provide is in the matter of diet and securing the proper amount of physical and mental rest for the patient. Material help can also be given by obtaining information as to the family history, and previous history of the patient, and in discovering such predisposing factors as unwise discipline, overcrowding, bad ventilation or some unexpected evil influence that would not be brought to light except by a visit to the home of the patient. The proper correction of ocular defects is a very important factor in the health of choreics; and the difficulties that are encountered in making these patients get suitable lenses and persist in wearing them when prescribed, can usually be overcome through the aid of the social service.

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## FEEBLE-MINDEDNESS AND SCHOOL CHILDREN.

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(*Medical Record, Aug. 23, 1913.*)

The period between the ages of 6 and 14 is the most important in the life of the feeble-minded child. It is during this period that he is able to make the best use of the special training which he requires. For this reason early recognition of his condition is necessary. Feeble-mindedness is often not suspected until the child by his inability to advance in school gives evidence of his condition. Parents very often either can not or will not see that their child is any different from other children. Sometimes they fail to bring to the attention of the family physician the apparent abnormalities of the child, but the family physician himself is very often at fault in this matter as he is very likely to lightly dismiss the subject with the remark that the child will outgrow his difficulty or that there will be a change at 3 years or at 7 or at 14. In this way valuable time is lost which might be put to good advantage. The fact that the child has arrived at any certain chronological period in his existence has no more bearing than does the condition of national politics. This superstition has not only been responsible for a vast amount of neglect of the feeble-minded, but has been the cause of early neglect of remediable defects, which had they been corrected at the proper time would have saved, in many cases, lives of suffering and inefficiency. It therefore devolves upon those who come into contact with the child in his early school days to recognize the importance of the situation and to take steps to remedy it.

The question of the responsibility of the public school to the feeble-minded child should be considered in relation (1) to the child himself, (2) to his fellow pupils, (3) to society in general.

In the ordinary classroom the feeble-minded child gains but little of value. It is true that some, in whom memory is well developed, will advance, but they gain practically nothing except the ability to repeat, parrot-fashion, dates, rules, and formulæ, understanding but little of their real meaning. Lacking primarily in the power of attention and unable to concentrate but for a short length of time, the long school periods become irksome and the children soon become fatigued and restless. The feeble-minded child is suggestible to a marked degree. He consequently learns easily evil habits which in his more normally poised schoolmate are little more than incidental phases of development without permanent damage, but in him tend to aggravation of his condition. He also is liable to become the scapegoat for the escapades of his companions and be led even into lawbreaking without any realization of the gravity of his offense. I have at the request of probation officers of the juvenile court examined a large number of boys who have been arrested on charges of theft and other crimes who were entirely incapable not only of understanding the gravity of their offense but of originating the plans by which the crime was carried out. In the majority of cases the real culprits escaped. The feeble-minded girl is doubly in danger. How great her danger is the records of any juvenile court or maternity hospital will show. It is unfortunate that these girls are very often attractive in appearance and manner, and, while their tendencies may not necessarily be immoral, their power of resistance is very slight indeed. It has been shown that a large proportion of girls leading lives of prostitution are feeble-minded.

Malnutrition and a lack of bodily tone, with lessened resistance to disease, is practically the rule in the mentally deficient. It has been noticed that whenever there is an outbreak of any of the acute infectious diseases in a school that the feeble-minded are always the first to succumb. On account of limited opportunities for contact with other children and unusual solicitude on the part of the parents, the feeble-minded child is often remarkably free from disease until he begins to attend school, when he contracts one illness after another. The tendency to the development of tuberculosis is marked. In fact, this disease is the greatest cause of mortality.

In the special or ungraded classes which are now a part of the school system in nearly all of our large cities, the feeble-minded child may, and usually does, progress up to a certain point. I am firmly of the opinion, however, that the feeble-minded child should be allowed to remain in the special class only a sufficient length of time for his condition to be accurately diagnosed, or until a place can be found for him in a suitable institution.

Of what advantage, except to the normal children and the teachers of the normal children, has it been to attempt to educate the feeble-minded children in the special classes of the public school? They are no more fitted to participate in the world's work than they were before; they are more dangerous to their fellows, less happy, their evil tendencies are greater, their powers of resistance less. They have lost valuable years during which they have added their quota of misery and debt, to increase as each year goes on, and to no purpose.

The influence of the feeble-minded child upon the other children in the class is bad. One such case can upset the discipline and impede the progress of an entire class. All children are highly imitative, and from amusement at grimaces and grotesque actions they soon come to imitate them. The moral obliquities of the feeble-minded are also a source of contamination to the other children. To include the feeble-minded in special classes with those who are only backward is an injustice to the latter. The backward child is capable of more or less rapid advancement to normal under suitable conditions and when given the advantage of proper individual attention. It is impossible for the teacher to give this attention when her time is taken up with the feeble-minded.

I have already alluded to the increased susceptibility to the acute infectious diseases and to tuberculosis. For this reason the feeble-minded child may become at any time a dangerous source of infection.

At a meeting of the American Academy of Medicine, held at Lehigh University, I offered the following suggestions:

1. That the public school is not the proper place for the education of the feeble-minded.
2. Careful examination should be made by competent investigators of all children when they first apply for admission to the public school.
3. Those found to be feeble-minded should be excluded and segregated in institutions (or when practicable kept at home under supervisory control of the proper authorities).
4. Doubtful cases and those backward in their development should, after the correction of physical defects, faulty environmental conditions, etc., be admitted to special classes where they will receive the training suited to their individual needs, and be under the observation of physicians especially trained in this sort of work.

This plan by some was considered to look like the millennium, though very desirable if it could be brought about. While recognizing the impossibility under the present condition of affairs of its being put into immediate execution, yet I do not see, when the general public, the school authorities, and the legislators have been brought to realize the importance of the problem of the feeble-minded, why some such plan would not be entirely feasible. In the meantime there is nothing, except the inertia of authorities, which need prevent an expert examination of each child when he enters school, with proper differentiation of the various types, and certainly, if it be necessary at the present time to continue the feeble-minded in the public school, nothing to prevent their separation from the backward and from those with slight defects of hearing, vision, or speech. With the feeble-minded in classes by themselves, we will at least know the number with which we have to deal, and other measures would follow.

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## A STUDY OF THE ETIOLOGY IN 175 EPILEPTIC CHILDREN.

ARTHUR WILLARD FAIRBANKS, M. D.

(*Boston Medical and Surgical Journal, Apr. 2, 1914.*)

Epilepsy can not be regarded as a disease in the sense in which the term should be strictly employed. The longer one studies the cases that come under his observation, the more he will find it impossible to give a concise and unqualified definition of any clinical entity, or in other words to a disease that as such may be termed "epilepsy," and the stronger will become his conviction that the state so designated is merely an instability of the central nervous organization, an inability of the nerve centers to maintain their equilibrium in the presence of either ordinary or extraordinary stimulation from without. The frequency, the persistency, and the degree of this instability of the central nervous system furnish us with a convenient basis of classification, which is, however, merely a convenience.

From this point of view all of the innumerable exciting factors of the individual attacks, so often emphasized as of importance in the etiology of epilepsy, become immaterial in so far as the solution of the real cause of the unstable state of the individual is concerned. They are merely the immediately exciting factors that for the moment overthrow the poorly balanced nervous system. Overemphasis of these exciting factors of individual epileptic or eclamptic attack serves rather to cloud than to clarify our understanding of the fundamental cause of the condition. Innumerable articles have appeared, and are constantly appearing in medical literature, the sole purport of which is the attempt to prove this or that exciting factor the real or fundamental causation of epilepsy. This tendency, persisting even at the present time, is to be deplored, for it only delays the recognition of the fact that every conceivable external stimulus may be sufficient to overthrow the static balance of the central nervous mechanism when its static balance is below the normal average of stability, and only then. What are the conditions that are responsible for this defective equilibrium? We must first consider the conditions that make the normal development of stability impossible.

In the first place the parent cells may not be endowed with those inherent qualities that permit the ultimate attainment of relative stability in the developed organism. In such instances the instability is inherited. It is of course impossible to assert the existence of this inherited instability unless there exists in the history of the ascendents of the individual positive evidence of similar instability.

Second, given parent cells with normal inherent stable qualities, some influence may be brought to bear on the embryo in utero to impair the development of the central nervous system and consequently to prevent the evolution of stability * * *. It may be relative to the otherwise normal physical development of the child or it may be but a part of a general defective physical development.

Third, with the embryo normally developed, there still remains, as a possible factor in impairment of stability, the incidence of trauma and disease. The period of birth is the time in the life of every child when the brain is exposed to the greatest danger. After birth there exists throughout the years of childhood the incidence of trauma and disease as cause of cerebral injury. The permanent structural damage produced by diseases that directly affect the brain, as meningitis, encephalitis, and hydrocephalus, is a matter of common clinical observation, while it is by no means a rare clinical experience to observe the serious injury done to the central nervous structure by the infectious diseases, either directly by the action of their toxin or indirectly through vascular lesions.

The study of these 175 cases confirms an opinion I have held for many years, as the result of the observation of many hundred epileptic children, that heredity is a minor factor in the etiology of epilepsy, whenever the disease is studied at such an age that the true details of the past and family history of the victim can be obtained. These data are obtainable in the case of children to an infinitely greater extent than when the disease is investigated only in adults. Both the data and physical examination of epileptic children indicate that the affection in the majority of instances is the result of acquired cerebral injury from trauma or disease.

## THE RELATION OF PHYSICAL DEFECT TO DELINQUENCY.

H. D. Newkirk, M. D., *Director and Surgeon to Research Department, Hennepin County Juvenile Court, Minneapolis.*

(*Bulletin of the American Academy of Medicine, February, 1914.*)

From the physical standpoint I think we can safely say that loss or lack of nerve control is the underlying cause of delinquency. This loss or lack of nerve control can be further classified as due to (*a*) nerve irritation, (*b*) gross failure of development of the nervous system, (*c*) lack of development of the higher centers of the nervous system. All of these factors are accentuated during the period of puberty.

Considering causes of nerve irritation there are certain defects which are well known to the medical profession, and in our work we have found them in the following order of importance: Phimosis and elongated, irritable foreskin, adenoids, diseased tonsils, malnutrition, eyestrain, anemia, impacted teeth, chronic appendicitis, hernia, and worms. Of course every physical defect is a source of nervous irritation more or less, but we have found these to be the most important.

The second factor in lack of control is failure of development of the nervous system. The group of children comprising this class is relatively small, but the delinquencies are usually of a more serious character. Here we find the cretin, Mongol, hydrocephalic, and microcephalic of the congenital group, and the acquired with arrested mental development as in the cerebral palsies, epilepsy, dementia, and syphilitic conditions. In this class, too, we should put those cases developing lack of control due to brain injuries. These children are unable to develop and carry out a well-laid plot and are just as apt to give away or lose the results of their trouble as not. Their delinquency is simply the uncontrolled impulse of a childish brain.

The third division, or lack of control due to lack of brain development, is of considerable importance. The former group has more especially to do with gross or macroscopic brain changes, while this class has reference to microscopic changes. I refer mainly to that group of children known to psychologists as Morons or border-line mentalities, a group varying according to different investigators, but one of large proportions and of great importance. These boys were formerly considered simply peculiar or erratic or just plain bad because they wanted to be so, and the rod, well applied, was considered the scientific as well as practical solution of the repeated delinquencies.

I have come to conclude that these boys are very largely victims of cross heredity. Usually one parent is fairly normal and well-balanced mentally, while the other is not. It is generally conceded that idiocy and imbecility are very largely directly traceable to faulty heredity. It is also, I believe, just as true that the higher grades of feedle-mindedness, shading all the way from the normal to the imbecile, are very largely products of a poor heredity. The main causes contributing to this poor heredity are alcoholism, continued for a long period previous to the birth of the child, devitalizing diseases, such as tuberculosis and syphilis, the nerve-racking strain of both high society women with their bridge and late hours, and the mental struggles of the poor to make ends meet, and other prenatal influences of similar nature.

During the different ages of childhood, delinquency has different phases and is influenced by different factors. The most powerful single factor is, no doubt, puberty or the period of adolescence. Why this is, exactly, we can not tell, but it is very certain that there is a marked change in the child at this time and especially the child with a weak mentality. The normal child has control sufficient to protect him against the mental delirium of a new experience and vision of life. He has sufficient mental ballast to carry him safely through the shoals till smoother waters are reached, but the child with the faulty heredity on the side of the nervous system is predisposed to loss of control at this most trying time, and once the fight is lost, it is doubly hard to follow the narrow path in the future. Fathers and mothers should be instructed in the care of their children at this time, for if a child crosses this period safely his parents need not worry over his future, for his habits will be formed and his actions under control by this time. On the contrary, if a child breaks down at this time and happens to receive punishment which he thinks he does not deserve he is very apt to be a confirmed criminal from that time on. It is at this period that the sexual desire is increased, and the boy who is overdeveloped sexually will need extra care, together with a liberal amount of physical work to take care of his extra energy. Overstimulation at this time with excesses brings about nervous exhaustion, with resulting loss of control. At this important period, when the young man is just coming to maturity, we find an exaggerated idea of self. In short, he is going through a period of adjustment, and if his sense of balance is not quite normal he will fall into misfortune. Thus, while this period, the climax in the life of the youth, may deviate only slightly from the normal, this slight deviation may be the "last straw" action as a stimulant either to hasten the day when he shall graduate into the ranks of the full-fledged criminal or brace him for a straightforward, manly career.

In summing up, let me state again that physical defect is without doubt secondary to environment as a direct cause of delinquency, and that mental defect or an unstable nervous system, due to bad heredity, is, in my opinion, of far more importance than the usual defects, such as of tonsils, adenoids, and vision. The boy with the well-balanced, finished nervous system will survive the misfortune of such defects as these, but to the undeveloped, unstable mind these defects, acting as a nerve irritation, tend to increase the strain on the already overtaxed, unfolded brain, and the outcome is only too frequently disastrous to the child.

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## THE PHYSICAL BASIS OF CRIME FROM THE STANDPOINT OF THE PROBATION OFFICER.

JOHN W. WITTER, *Superintendent Chicago Boys' Club, formerly Chief Probation Officer, Chicago.*

*(Bulletin of the American Academy of Medicine, April, 1914.)*

In an examination of all the children at one particular time in the Chicago Detention Home, 203 carious teeth were found in the mouths of 58 children, and but 4 of these children had ever visited a dentist. In 90 per cent the teeth were almost totally destroyed.

An examination of 2,367 children showed that 65 per cent had decayed teeth, which were in need of dental care and treatment. We can easily imagine the suffering that would come from 203 decayed teeth. There is little question as to the effects of bad teeth on health and nutrition, and it does not require a great stretch of the imagination to believe that an aching tooth has many times been the first cause of irregularity in attendance at school, and everyone knows that irregular school attendance is one of the first steps to the juvenile court.

The following four cases are typical of hundreds that have come to the attention of the probation department of the Chicago juvenile court:

One that is now before it is the case of a lad from one of the very best families, who has claimed the attention of the police on five or six different occasions—each time for stealing. The last time he stole an automobile. The first time he was brought in those closest to him did not believe he was guilty. The minister of the church, an attorney who was the boy's Sunday-school teacher, and his employer, all came forward giving him the best of recommendation, and making special mention of the good traits of every member of his family. The boy finally admitted the theft to the judge. The probation officer visited the boy, and was surprised, in a very few days, to find out that he had again been stealing. Incidentally, the parent made mention of a severe fall that the boy had had when 3 years of age. An X-ray examination was made of the boy's skull, and it was found that a splint was pressing on certain portions of the brain.

Another case—a boy about 12 years of age, who for years had been unmanageable at home and school, had done very little at school, and had been kept practically all this time in one grade, was picked up a number of times for stealing, and was finally brought to court. It was learned that he was really a "stool pigeon" for other boys. An examination showed that the boy was a subject for the feeble-minded institute.

The third case is that of a young girl who had an extremely bad temper. The probation officer was continually securing a position for her, which she kept for but a short time. The girl often complained about her eyes. Finally she was taken to an oculist, who discovered a terrific eye strain. She was fitted with glasses, and the girl got along so well at her work and at home that the officer finally lost track of her. After more than a year the girl again came to see her about a job. It was the same old story, but it was learned that the girl had broken her glasses and had been doing without them. She again began wearing her glasses, and the former satisfactory experience was duplicated.

The fourth case is a lad who was regularly picked up by the police for stealing and for running away from home. This happened as many as a dozen times in six months. He was finally brought into court and, upon examination by a physician, it was found that he had had a great deal of illness, was exceedingly nervous and sometimes hysterical. His nutrition and development were both very poor. It was recommended that he live an out-of-door life, and he was sent to the country. In a few months his condition was greatly improved, he gained in weight and height, has given no further trouble, and advanced four grades in school the first year.

## THE SCHOOLHOUSE AS A CRIME CONTRIBUTOR.

EDWARD C. ELLIOTT, PH. D., *Professor of Education, University of Wisconsin.*

(*Bulletin of the American Academy of Medicine, December, 1913.*)

Up to the present moment the relation of education and criminality has been narrowly interpreted, either in terms of intelligence as increased through instruction, or in terms of physical condition as improved through care and protection. To many of us engaged in the serious study of education as the greatest of the social constructive professions, it appears that another item must be considered along with instruction and hygiene before the influence of the school will be positive in producing individuals possessing permanent behaving tendencies of a noncriminal sort. Broadly speaking, this new item is adequate and proper material provision in the public school for responding to the normal demand for *activity* on the part of both children and adults. Until this is brought to pass the American school will be guilty a contributor toward delinquency. Our ethics and our medicine have been too individualistic. The moralist and the hygienist, to make a bold assertion, have regarded the individual, particularly the child in the school, as something that could be made morally antiseptic as easily as he could be made physically antiseptic. Scanty isolated illustration must suffice.

Just now the subject of physical morality occupies a large place in current thought. We are becoming more and more concerned with the possibility of making an effective program of public instruction, inside and outside of the school, in the matter of sex hygiene. Of what avail is such a program so long as the one place in the schoolhouse where sex obtrudes itself represents too often conspicuous uncleanliness, sanitary incompetence, and evil suggestiveness. As long as the larger per cent of American schoolhouses have their present inadequate and uncleanly toilet provisions and arrangements shall we have a contagious center for immorality.

There is, the country over to-day, an insistent need for the empowering of State boards of health with efficient authority to clean up, not only our dirty physical schools, but our dirty moral schools. This is easy to assert, but difficult of performance. A case in point is that of an eastern State where the conditions to which I have just referred are notoriously bad. The president of the State board of health told me a few days since, while discussing the possibility of a more effective enforcement of the law now giving that board the power to condemn schools with improper and unsanitary outhouses, that a proper enforcement of the law would mean its immediate repeal by the legislature. A study of the social and educational situation in that State convinces me that he was right. There is a vast difference between clean statutes and clean schools.

The American schoolhouse is primarily a contributor to our criminal account, because it fosters just that kind of uncleanliness in which the seeds of criminality find a ready growth. A large part of the problem of social hygiene centers in one part of the American schoolhouses.

The child of the city to-day is the child of the streets. To keep the child off the streets is next to an impossibility. His presence there presents not only an educational problem, but a social issue of increasing magnitude. The crime-preventing schoolhouse must provide, within and without, for proper play space for the children of its neighborhood. This schoolhouse must constitute itself a center for the physical and social activities of children outside as well as inside the school if it would successfully counteract the destructive influences that now characterize the streets of the American city. The schoolhouse of the average American city can not be held guiltless so long as it fails to compete with the alley.

The schoolhouse that keeps bankers' hours is only half a school. Within a few weeks the board of education of a middle western city ordered all-night lights placed at the darkened entrances of all public school buildings. The reasons therefor were obvious. A good police measure, but a doubtful educational policy. The light might better have been provided for the inside and not for the outside of the building. Until the American schoolhouse is constructed so as to make proper provision for the legitimate recreations and amusements of our civilization, your medical sociologist will have an increasing task before him. If we are to fight the devil with fire it is not unlikely that the billiard table and the dancing floor will find a place in the completely equipped and socially enlarged American school building.

The schoolhouse that remains closed for one-third to one-fourth of the year certainly presents a defenseless social policy. For the city child a summer vacation represents a crisis in moral development. The criminal responsibility of the schoolhouse will not be removed until it undertakes to be in operation throughout the whole year and in a way that will meet the instinctive needs of children and communities.

The most characteristic American immorality is political immorality. The American schoolhouse must be constructed so as to enable its use as a common meeting place for the discussion of political problems and social issues. "Keeping schools out of politics" is a pernicious doctrine. If the American schoolhouse is to be the real temple of democracy it must be constructed and arranged so as not only to safeguard children from physical ills and to promote their best physical development, but also to serve as a shrine in which our people may protect themselves from the criminal furies of modern political life.

So long as we regard the schoolhouse as an influence apart from normal daily life will it remain a factor in the development of the abnormal and the artificial. Our first school buildings were designed and arranged by theologians and pedagogues. Next came the architects and the engineers, who were followed by the physicians and the hygienists. To-morrow the ideals of the humanist will control, ideals that seek to combine the necessities of instruction and of art, of construction and of health, of activities and of morals. All—pedagogue, architect, engineer, physician—must unite to make the schoolhouse sterile of the germs of immorality and criminality.

## TEACHING OF HYGIENE IN PUBLIC SCHOOLS. RECOMMENDATIONS OF THE COMMITTEE OF THE AMERICAN ACADEMY OF MEDICINE.

HELEN C. PUTNAM and EDWARD JACKSON.

(*Bulletin of the American Academy of Medicine, June, 1914.*)

I. That from kindergarten up, by progressive steps, children be helped to learn through studies of plant and animal life the essentials of human physiologic processes, parenthood, heredity, the essentials of influence of environment on health and development, including microorganisms, insects, and other carriers of communicable diseases; that included in lists with typhoid, tuberculosis, and other common contagions, syphilis and gonococcus infection be enumerated, corresponding data being given for each in the list.

For this purpose it is urged that fellows of the academy concentrate individual influence on institutions training teachers and on boards licensing them, insisting that they be adequately prepared and tested in the elements of physical and chemical, biologic, and social sciences with special reference to their practical applications in hygiene and sanitation.

II. That, beginning in seventh and eighth grades, and continuing through high school, girls shall progressively acquire skill in home making by practice in intelligent application to household affairs of the related elementary principles in physics, chemistry, and biology; this to include for girls over 15 years of age details in the care of infants and children. It is also recommended that boys be permitted to take such of these courses as they wish, and be required to take those parts concerned with municipal and household sanitation and with the social relations of the home.

III. That to meet the needs of the several million children who annually drop out of primary, grammar, or high-school grades, for girls (young women) over 15 years of age, schools or classes in home making be established by the State; and that in all continuation schools or classes for boys (young men) and young women instruction in sanitation and personal hygiene supplement vocational teaching, the minimum being the health details connected with the vocation itself and with the well-being of their families.

IV. That to establish health habits and ideals, a regular part of the daily work of children at school shall be the testing of temperature, humidity, dustiness, air currents, air freshness, cleanliness, etc., by instruments of precision so far as possible (thermometer, hygrometer, anemometer, for example), charting results on the blackboard and permanently recording them in a book, with such service in correcting faults as is suitable; and that open-air rooms be established in every public school system.

V. That special attention be given to having all forms of physical exercise, including dancing, adapted to individual needs, *taken under sanitary conditions*, and conducted with insistence on correctness of fundamental technical details, as, for example, standing position, carriage of shoulders and head, closed mouth.

VI. That medical men and women, nurses, janitors, and their supervisors be provided with instruction and training in school sanitation and personal hygiene according to the public duties which each class undertakes, as teachers are supposed already to be; and be carefully tested before appointing or licensing.

## THE TEACHING OF SEX HYGIENE IN THE PUBLIC SCHOOLS.

PROF. C. R. HENDERSON, *University of Chicago, President of Chicago Society of Social Hygiene.*

(*Chicago Medical Recorder, November, 1913.*)

I will put myself on record as favoring the purpose of those who are seeking to give education—and I am choosing my word very carefully—on this subject in our public schools, families, churches, and everywhere else. I do not like the words "sex education." Perhaps "education with reference to sex" would be still better; but the whole treatment of the subject is evidently transitional. I hope the time will come when the word "education" will cover all that boys and girls, and young men and young women, older men and older women, ought to know; that nothing will be omitted; that everything will fall in its place in the teaching of biological science, morals, and physical training, and in the teaching of religion; that everything that interests humanity will be taught in its place and in its due proportions.

I think the whole difficulty has arisen because of false notions in regard to education in the past, and that there ought not to be, and in the future—perhaps not far away—there will be no such thing necessary as "sex education." It is my profound conviction that the time will come when boards of education the world over will seek to develop and direct to their true goal all the normal interests of humanity. Instruction on this subject must of course be given by competent persons of proper character as well as of adequate information. That is essential to the success of our enterprise, and any other persons than these would do the cause a great deal of harm. I believe that the original motive of the medical society is one that ought to be the motive of all of us—to protect people against infection, against the spread of loathsome and destructive diseases that come from prostitution and its consequences.

Instruction is the least part of education. You may, indeed, protect a great many people by telling them the dangers of certain courses of conduct, but if you can do nothing more than excite the physical fears by giving medical instruction, you have done nothing indeed, and sometimes harm; but you have not accomplished your full purpose, even as medical men, until you have gone further than instruction. Education means vastly more than that. It means the shaping of ideals, a play upon the feelings, such a kind of education as will make the boy chivalrous, knightly, and regard the interests of every daughter of Adam as the interests of his own sister, even if that daughter is a prostitute herself; a boy who will respect the ideal of womanhood even in those that we call fallen and outcast; who will be such a boy, such a lad, such a young man that when he comes to be a man he will be ashamed of himself if he even hints at the argument that it is necessary, in order to protect wife, sister, or daughter from these great evils, that we must have a class of prostitutes.

A second word of caution and warning must be spoken, though the danger of being misunderstood at this point is great. An honored physician once said to me: "You make a great mistake if you merely dwell upon the medical side of this question. There are a great many other sides—the moral and the religious."

Much as you and I believe in the importance of protecting people against venereal poisons, there are some things that are vastly worse than venereal poisons. The medical profession say that these diseases can, within limits, of course, be cured. They tell us that they can "make sin safe." I do not say that they are wrong; that is a medical and professional matter. But if you could prevent all these diseases and keep prostitution you still have the real evils to combat. We must not be contented with a half victory. We maintain that victory at the cost of greater victories yet to be achieved is a kind of defeat. I have a right to say it, as a teacher, as one responsible for shaping the character of young men and young women. I say that we must not dwell too exclusively on this matter of the prevention and healing of venereal poisons. There is a deeper poison. When the young man permits himself to go into this kind of company there is a damage done to his spirit, to his soul, to his character, to the community. Metaphorically speaking, there is such a thing as a soul poison, and that to me is the supreme interest of this whole business. We must not be satisfied with a temporary and superficial gain. Medical science will gain its victory and we shall all rejoice when these poisons have been done away with. It is toward that ideal that we are moving. But when you have achieved that, beyond there still lies this greater, larger problem, and we can not do it alone as teachers, as ministers of the gospel, and priests of the church; we must have the help of medical men, who come nearer to being the true confessors of the community than any other class among us. What a wonderful trust when we commit to the hearts of the members of the medical profession the secrets of the household. Therefore, because we trust in you, we ask you to use all of your influence to aid us; and we believe that you will. We believe you will be interested not only in the prevention of disease, but that you will join, as citizens, as fathers and mothers, as good friends of humanity, with us in trying to hold up the highest, the loftiest ideals of the race; so that the physical purity of the race will go hand in hand with the purification of the spirit of the race; and then shall we have, with your help—without it, never—a purified and an exalted humanity, that will look back to the disgrace and sorrows and pains of the past as things that have taught us the most lasting, eternal lessons of life.

## PROPAGANDA AGAINST ALCOHOLISM.[1]

ALFRED GORDON, M. D., Philadelphia.

(*Journal of the American Medical Association, Jan. 17, 1914.*)

A useful measure for decreasing and preventing alcoholism is propaganda in its broadest sense. The moral and intellectual influence of various antialcoholic societies is beneficial. The good they do can not be sufficiently appreciated. Moral persuasion and conviction are most efficacious in that direction. The widest publicity concerning the effect of alcohol on physical and mental health should be considered as vital. The public should read and see the pernicious consequences of alcoholism. Lectures and clinics should be systematically organized and actual demonstrations given. The public should be invited to visit particularly institutions for the feeble-minded, where they could see for themselves specimens of humanity brought into the world by parents whose alcoholic excesses have thrown on the community a useless burden. Imbeciles, idiots, and those otherwise mentally deficient, epileptics, and children with all sorts of morphologic abnormalities result from parental acquired diseases or pernicious habits, of which alcoholism is one of the most conspicuous.

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[1] General title of article: "Administrative and prophylactic measures against alcoholism."

Propaganda against alcoholism should be particularly applied to young persons and children. The rôle of the physician is here indicated. It is he who comes in contact with families. As counselor in medical and hygienic matters he can use his great influence in various circles. Considered as a man of knowledge and experience, he will be listened to. He can prevent parents from giving children their first taste of drink. It is he who controls the diet and hygiene of children. It is to him that the mother addresses herself for advice as to the habits of her children.

Next to the physician is the children's teacher. But the teacher himself must be well informed as to the nature and dangers of alcoholism. He should have taken, before he is prepared to instruct, a special course in social hygiene in which the effects of alcoholism should occupy a prominent place. Such a course should be given in schools and colleges, and the instruction should be not only theoretical but also practical. It is necessary that every youth leaving school should possess a fundamental knowledge of the effect of alcohol on tissues, organs, the nervous system, the mentality, and the offspring. From a tender age the child should be thoroughly imbibed with the idea that alcohol is one of the most obnoxious and dangerous poisons. It is the knowledge of what is true, useful, and indispensable in life that presents the most powerful weapon against the acquirement of pernicious habits or diseases. Imparting this knowledge constitutes real scientific prophylaxy.

The public at large should be familiarized with the fact that one of the threatening features of alcoholism is depopulation not only quantitatively, but also qualitatively. It leads to a degeneration of both the individual and the species. It produces a slow and progressive individual deterioration and an intellectual and physical sterility of the race.

## TEACHING OF FIRST AID IN SCHOOLS.

CHARLES A. KINCH, M. D., New York.

(*Bulletin of the American Academy of Medicine, June, 1913.*)

The idea of instruction in first aid to the injured originated in the brain of Prof. von Esmarch, of the University of Kiel, when he was surgeon general of the German Army. He argued that the efficiency of the soldier would be increased, his suffering alleviated, and often his life would be saved, if his wounds could be promptly dressed on the field. Accordingly, every man was furnished with a packet sewed into the lining of his coat, containing a clean compress, a bandage, and a strap for a tourniquet to stay the flow of blood. The results justified the expectations, and after the Franco-Prussian War he expanded his instructions so as to be useful to railway and steamboat officials and employees in factories and mines. He added chapters on poisons and household emergencies. Good Samaritan societies were established all over the Empire. The idea was transplanted to England, and grafted on the St. Johns Ambulance associations which had been formed to inspire manliness in young men and teach them to save people from drowning. In 1882 a first-aid society was organized in New York City to give this instruction. Recently the American National Red Cross has created a very efficient first-aid department for instruction in all the large cities of the country, New York being left to the society already established there. The Pullman Co. has given the Red Cross a railway car completely equipped with appliances, both for giving and teaching first aid. Many of the western railroads, and lately the Pennsylvania, have welcomed this instruction. The Bureau of Mines has also made a liberal use of the Pullman first-aid cars. Many classes have been formed in settlements and neighborhood houses. The New York Board of Education regularly includes this subject in its courses of free lectures, and a very large number of those attending have submitted to examination and received diplomas. The question of including first aid in the scheme of public instruction has been broached. The Boy Scouts and similar organizations of boys all over the country have taken up the matter, all of which leads us to the inquiry: At what age is instruction in first aid best to be given?

The average boy is content to be in "leading strings" until his tenth or eleventh year. At this age he aspires to be a leader, or at least to be a member of a gang. Altruistic principles do not develop until a couple of years later. Neither is cooperation or team work well done before the thirteenth or fourteenth year. Then the boy realizes that he has a neighbor and he wants to do something for that neighbor. His sufferings appeal to the boy's sympathy. Then also he is able to understand the mechanism of the human body and has acquired a certain amount of dexterity in the use of his own hands and members, and he has attained a measure of stature and strength that makes him efficient in rendering prompt aid to the injured.

Of girls about the same things may be said. They are more capable of serious altruistic thought after the thirteenth year than in their childhood days. And by that physical and mental development better able to comprehend and apply the principles of first aid.

Nothing in the foregoing is to be construed as discouraging special instruction for imminent needs. But just as correct speech is taught from the earliest days and the study of grammar and rhetoric deferred until riper years, so should instruction in first aid be fragmentary and adapted to present emergencies in the case of little children and its systematic study be postponed to the third or fourth year of the high-school curriculum. In social settlement work the proper pupils for instruction are to be found in working girls' clubs and young men's classes rather than in the junior organizations.

## THE EFFECT OF COMPETITIVE ATHLETICS ON SCHOLARSHIP.

H. D'ARCY POWER, M. D., San Francisco.

(*California State Journal of Medicine, October, 1913.*)

Two years ago the State Medical Society of California appointed a committee to investigate the effects of athletic training in the high schools and universities and made me a member thereof. As my colleagues were devoting themselves to a consideration of ultimate physical effects, I thought it might be a useful division of labor if I concentrated on a study of the mental side of the question. This paper is the result and is in fact an expansion of my subreport, dealing also with some points that are perhaps a little outside of the direct scope of the authorized inquiry and presenting opinions for which I alone am responsible.

That I may the better present the matter, I propose an attempt to answer the following questions:

First. Is the expenditure of public or quasi-public money for higher education authorized or intended for any other purpose than the cultivation of the mind and the acquirements of knowledge?

Second. Is it necessary or desirable that in order to obtain such intellectual ends physical culture be a part of the curriculum?

Third. If physical culture be desirable, is the method of training a part of the student body in competitive athletics a proper form of such training?

Fourth. What is the ascertained effect, as seen in scholarship and life, of competitive athletics in high schools and universities?

It seems scarcely necessary to ask the first question. That the public is paying for high schools and universities, and private munificence in endowing the same, makes such expenditures for the sole purpose of affording opportunities for the cultivation of the mind, would appear self-evident. Legislative enactments and endowment deeds alike plainly state such to be the fact. These institutions neither exist for their own glorification, for the benefit of any group of individuals, directly or indirectly, nor for any material or social benefit to their alumni that is not the direct product of intellectual culture and efficiency.

Question 2. If we turn the question over to physiology and psychology, certain interesting questions will present themselves. Here are a few:

What rôle does the muscular system play in the life of the organism and the development of the brain.

It is to be remembered that the muscles contribute more than half the mass of the body. Variations in their condition or bulk lead to fluctuations in energy production and chemical changes that affect every cell in the organism. We are too much inclined to think of muscles solely as part of the machinery of motion, but it is to be remembered that we are warm-blooded animals compelled to metabolize a given quantity of food per day to maintain our temperature, and that the muscle is the chief agent in such fuel burning. Ergo, shrunken muscles mean defective heat production and possibly transference of the function to cells that normally are devoted to other purposes, involving, in its train, general malnutrition. From this viewpoint a defective musculature must also involve neural elements. But musculature stands in another and even closer relation to the nervous system. Most of the neuronic cells of the cord and a large proportion of those of the brain are directly concerned in inhibiting or controlling muscular movements. Without functional use their nutrition is not maintained and analogy would require us to expect that adjacent areas devoted to sensory or psychic uses, participating in a common blood supply, are likely to suffer by reason of their contiguity.

We have excellent clinical evidence to this effect in the experience of the prison at Elmira, N. Y. It is part of the reformatory activities of that excellent institution that the unfortunates committed to its care shall receive instruction during their incarceration fitting them for useful service in later life. It was found in the case of the undernourished, muscularly defective, slum-raised prisoners such efforts were fruitless. They neither had the desire nor the capacity for the simplest instruction; but after a course of physical training, with the growth of the body appeared the ability to profit by mental training. So much for the affirmative side of the proposition.

There can be no question as to the desirability of a fairly developed muscular system, kept in reasonable activity, both for its effect on the organism as a whole and the brain in particular. It is, however, to be observed that in considering the classes with which we are dealing, namely, the students of high schools and universities, cases of muscular deficiency such as those encountered in Elmira are very rare. The disadvantages of excessive musculature are many. To begin with, the musculature constitutes the mass of the body. The very idea of health implies balance. To overdevelop or overexercise any one part of the organism is pathological, as Prof. Lee, of Columbia University, writing on this subject, says: "Physiology teaches that fatigue of one tissue from overuse means fatigue of all tissues. Extreme activity of the muscular system involves not only lessened muscular but also lessened mental activity." But the overuse of the muscles means more than diversion of energy. It implies cardiac strain, with its secondary effects; most important of all, it involves flooding of the system with myogenic katabolites, and that these are poisons the fatigue phenomena of muscle tissue amply prove.

[Then follows a discussion of sensory and motor types of mind, athletes belonging predominatingly to the latter type.]

I would, therefore, be inclined to answer question 2 as follows: Reasonable muscular development and activity is necessary to the attainment of a physiologically balanced organism, and muscle training within limits is conducive to brain development. But there is no evidence that the mass of high-school or university students are so underdeveloped or lethargic as to call for special provision in this direction. If such were the case it would demand an organization of physical training as an integral part of the curriculum from which none should be exempt.

Question 3. Admitting that physical training is desirable, though not indispensable, is competitive athletics a proper form of such training? The first point to be observed is that competitive teams are recruited from a small part of the student body. Let us ask what part? From the poorly developed, who need and would be benefited by exercise or training? We opine not. Such material does not provide the sinews of war. Do they represent the sensory type of mind, with its tendency to excessive introspection, suspended judgment, and slowness to act; whose possessors, even when muscular, would be benefited by the training of the campus? Again we opine not. The man who takes to competitive athletics as a duck to water is the individual of motor type, whose energies constantly bubble into muscular action, who naturally acts on the spur of the moment. He is of the fluid attention, who never learns to study. To such men competitive athletics is as easy as mental work is hard. But they not only do not need training along these lines, but all such training tends to further fix their unfortunate natural tendencies. The athlete must act, not think; so the greater the perfection of their technic, the more automatic the working of their minds. Competitive athletics train the wrong man, physically and mentally. The view here propounded that the man who goes in for exercise is by nature averse to study is not only based on the psychological principles set forth, but is supported by the observation of the majority of teachers. In answer to a questionnaire (to be described later) sent by the writer to all the universities of the United States and to the largest high schools of California, this view was supported by 60 per cent of the replies.

Question 4. I prepared the following post-card questionnaire:

**The Committee on Athletics of the State Medical Society of California will be obliged by an answer to the following questions based on your personal observation. (Kindly return answer within a week.)**

**1. Have you found students excessively addicted to athletics disinclined to or incapable of intellectual effort?**

**2. Do students that have passed through a period of athletic training show any falling off in the quality of their college work? For how long?**

**3. If so, what is the effect on—**

Memory.
Concentration.
Reasoning.
Will power.

**4. Have you noted any relation between athletics and morals in general? In ideals? In restraint?**

**(Signed)** ——— ———,
*Professor or instructor in University of———*

I forwarded a number to the president of every important university in the United States and to 20 of the high schools of California, together with a letter in the name of the State Medical Society of California, asking the cooperation of the presidents to the extent of placing the questionnaire with the men who would give the most useful and unbiased information, and also inviting correspondence. A very large number of replies resulted, and the great universities in particular have afforded valuable data.

[Then follows a criticism of the dependence of competitive athletics upon gate receipts.]

Bearing in mind the probability that current tendencies must have made for a predisposition to answers favoring competitive athletics, I will proceed to analyze the replies. As already stated, 60 per cent of the total replies express a belief that the athlete is naturally disinclined to study. The high-school instructors place it as high as 75 per cent. This is to be expected, as the nonstudious youth would naturally tend to drop out at the end of the high-school course. The second inquiry is answered in equal proportion by high-school and university professors and is to the effect that 75 per cent of them are of opinion by direct observation that men in training show a falling off in scholarship. Some of my correspondents are explicit on this point.

The third question was designed to ascertain whether the influence affected all or part of the mental faculties, and the terms used were such as everyone understands, even though some psychologists might consider them obsolete. The answers are striking—94 per cent state concentration to be weakened or destroyed; 86 per cent note weakening of memory; 83 per cent weakening of will power; 78 per cent of power to reason. Again, the high-school instructors give a more averse opinion than do the university professorate.

We now arrive at the last question, "What is the effect of competitive athletics on morals?" The very varying opinions expressed are seemingly due to the different ways in which the question was interpreted. It appeared to me that morals could be affected in two not necessarily connected manners. Ideals of conduct (not confined to the game) and life could be raised or lowered. And the power of restraint in face of temptation could be strengthened or weakened, not merely for the sake of physical fitness during the training period, but as a continued influence during life. My questions were designed to bring out observations on these points. Unfortunately, the answers show that in a very large number of cases the respondents considered only the ethics of the game and the training period. We thus find 60 per cent expressing a belief that ideals are improved, but when reasons or details are given they refer solely to fair play in the game. Adverse criticism is, however, explicit. * * * Seventy per cent of the answers are favorable to athletics as increasing power of restraint, but again the result is vitiated by the prevalent underlying thought that because excesses during the training period are sternly interdicted, therefore the men have acquired habitual restraint. * * * As stated, the preponderant opinion as given in the answers to the questionnaires is favorable to athletics as a good moral influence, but the number of replies to this question was smaller than to the others, and I believe largely given under a misunderstanding. Lastly, 40 per cent of all replies were neutral.

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## ATHLETIC SPORTS IN RELATION TO HEALTH.

(*Editorial in Journal of American Medical Association, Mar. 21, 1914.*)

It is one of the numerous parodoxical facts encountered in everyday life that the problems of athletics rarely receive the attention of those who are most concerned with health, the supposed ultimate purpose of bodily exercise. The management of athletics is rarely found in the hands of a physician, by whose scientific guidance one might reasonably expect that the various sports would be enabled to effect the best of which they are capable and would be freed from the unconcealed dangers attending some of the present athletic practices. Athletics have for the most part to-day become the province of the people at large. It is the uneducated trainer rather than the physician, the hero-worshiper rather than the hygienist, who directs and inspires the performance of the physical exercises which ought to be undertaken primarily in the interests of a sound body and a sound mind. Games have developed into contests in which victory is sought at any human price. The "manager" is the foremost adviser, and the physician is called on as a last resource to mend the damage that may have been done in an ill-advised struggle for athletic supremacy. Such are the exhibitions that the populace wants. Until there is a wide-spread education of the people as to the proper underlying purpose of bodily exercise and the dangers that beset the indiscriminate and uncontrolled pursuit of athletics by every one whom the inclination stirs, it is a seemingly hopeless task to preach the gospel of reform.

Meanwhile, the physician and the physiologist must content themselves with acquiring the data on the basis of which sound judgment in relation to the problems of exercise and sane advice in the pursuit of athletic sports may be obtained. Only the beginnings have been made in this field of study. If football or rowing or bicycling have their dangers, what are they? Wherein do the respective advantages of the various types of physical exercise lie, and what are their unquestioned effects on the organism? What are the physiologic prerequisites for participation in each form of gymnastic performance? These and a host of similar questions demand ready answers in respect to which there should be common accord, precisely as there now is a growing appreciation of the physical standard of health demanded in the various industrial occupations. In the latter case the subject is investigated because it has become a matter of dollars and cents; when health and happiness are the sole end sought the same question has been neglected.

Among the internal organs the heart and kidneys have hitherto received most consideration in connection with the physiology of exercise. There is an idea abroad that each form of athletics has its own peculiar types of pathologic defects. Just as one hears of the "tobacco heart," there are the alleged "bicycle heart," "football kidney," etc. It has been the merit of Albu, in Berlin, to point out that the pathogenesis of the abnormal conditions familiarly associated with the pursuit of athletics may be interpreted from a common point of view. In other words, all undue muscular exertion, whether carried out by one group of muscles or another, in one type of movement or a different one, affects certain groups of organs and metabolism in general in entirely comparable ways. The physiologic or pathologic result may vary in degree, but not in kind. The effect of vigorous exercise in its more extreme manifestations exhibits two phases: First, there is a stimulation bringing about a rapid, vigorous circulation to the taxed muscles and the internal organs and disclosing itself by the rise of blood pressure and augmented cardiac activity. This is followed sooner or later, as the varying intensity of the exertion may determine, by a depression phase. A fall in blood pressure and functional heart weakness ensue. It is the latter aspect of the results of undue exercise, with the derived consequences of cardiac insufficiency, that is most likely to engage the attention of the phy-

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sician. In varying intensity the symptoms of stasis throughout the circulation now arise. Venous stasis in the kidneys occasions the characteristic nephritic changes which find expression in the altered composition of the urine. Every sort of pathologic sediment, ranging from the slightest deviation from normal to the picture of severe nephritis, may be seen. Frequently the extremely sudden onset of circulatory changes determines a degree of venous hyperemia quite comparable with the condition in acute hemorrhagic nephritis. In the "athletic kidney," however, the pathologic manifestations are always caused by functional disturbances rather than by morphologic alterations in kidney structure. In this respect Albu is inclined to compare the kidney changes resulting from undue exercise with those occurring in orthostatic albuminuria, which is likewise presumably a purely functional phenomenon. He believes that extreme exertion of the musculature of the lower limbs is far more likely to induce renal stasis than the exercise of other groups of muscles. In confirmation of this it is said that even vigorous use of so-called chest-weights and other apparatus of similar design rarely, if ever, disposes to abnormal kidney manifestations in the way that running may.

It is asserted that the kidney disorders at times discovered as the result of the active use of the lower limbs, in running matches, for instance, are due to the mechanical jar or vibration peculiar to this form of exercise. Observations made on numerous persons who have undergone long journeys by railway, in which the opportunity for such alleged injury by vibration alone is not inconsiderable, have failed to disclose any damage to the kidneys.

Athletic exercises may be differentiated into feats of strength and feats of endurance. Albu maintains that these differ essentially only in the fact that in the one case (in tests of strength) the initial rise in blood pressure is very soon transformed into one of depressed circulation; in the case of endurance tests this comes about more gradually. In feats of endurance the fall in blood pressure reaches a much lower level than is found in the brief exhibition of great muscular exertion, and the physiologic consequences are determined accordingly. There are no important differences between the different types of athletic sports in respect to their physiologic effects on the body. The severe symptoms, however, make their appearance more prominently in the exercises like football, wrestling, bicycle contests, etc., which may call for extreme exertion. Every forced muscular exertion leads to a precipitate rush of blood to the periphery and the internal organs. An enormous volume of blood may be driven into the arteries in a very brief period. When the cause of this circulatory response is removed, equilibrium speedily enures. The heart is not overtaxed unduly long and the encountered weakness is transitory at most; but in contests of long endurance the final outcome is a prolonged and unrelieved fall in pressure, with an increasing relaxation of the fatigued cardiac musculature.

To what degree the distinctly pathologic manifestations of improper athletics may arise depends on a variety of circumstances, some of which can readily be indicated. Age is a factor of significance. During the period of adolescence, when the organs have not reached their full development, the responses are pronounced, and the person is usually sensitive to muscular excesses. "Constitution" expresses in a somewhat vague way another factor which determines the fitness of a person for athletics. There must be adequate development, suitable nutrition, and a competent nervous system, the latter element often being undervalued. Obviously, appropriate training furnishes another safeguard against the dangers of athletic overdoing. Much of what is called "training" in this country is, however, a combination of unscientific and sometimes irrational dietetics with psychic quackery. Last, but not least, the degree of exertion required is a feature of determining significance when the ill effects of athletic sports are to be avoided. The distinction between doing and overdoing needs to be learned and appreciated more than any other single factor in the rational pursuit of bodily exercise for health and enjoyment rather than for personal superiority and group supremacy.

## THE CARDIAC EFFECTS OF IMMODERATE COLLEGE ATHLETICS.

LEOPOLD SHUMACKER, M. D., and WILLIAM S. MIDDLETON, M. D., Madison, Wis.

(*Journal of the American Medical Association, Apr. 11, 1914.*)

The frequency of cardiac lesions among the men participating in competitive sports at the University of Wisconsin has emphasized the urgency for a study of this subject from a clinical point of view. From this aspect it may be divided into three parts: First, the immediate effects of severe muscular strain on the heart; second, the effects of training and a series of severe athletic contests on the heart; and, third, the ultimate effects on the subsequent life of an individual of alterations brought about in the heart through athletic contests in early life.

From a review of the immediate effects of severe muscular exercise on the heart we conclude that—

1. Normally, during severe muscular exertion, there is an increase of pulse rate, arterial and venous blood pressure, pulse pressure, and of the systolic output of blood.

2. In the period immediately following, there is a fall of pulse rate to normal, and of arterial blood pressure, pulse pressure, and, frequently, of the diastolic size of the heart to below normal.

3. Increased diastolic distention during violent effort may reach a point beyond the capacity of the heart muscle to bring about a com-

plete systole. This results in the typical symptoms of acute cardiac dilatation. The weakened condition of the cardiac muscle is shown after the cessation of bodily effort by its inability to contract to its normal size or below. This precludes all possibility of obtaining the rest needed after the strain of increased diastolic expansion and systolic contraction prevalent in very active exercise.

4. Clinically it is well known that infectious diseases predispose to myocardial weakness and to acute dilatation. Experimentally, De la Camp has shown that starvation, likewise, so predisposes. Some authors doubt if there be nonpathologic hearts with a musculature so weak that it can be strained sufficiently by muscular exertion to dilate acutely. Case 2 (1361) appears to indicate that at least chronic overstrain may weaken the myocardium to this extent.

5. At present we have no definite means of judging by clinical tests whether or not an untried apparently normal heart is capable of standing the strain of athletic contests. Some weak hearts remain dilated after a relatively slight exertion and are, therefore, clearly without adequate tone to withstand the severe strain. On the other hand, hearts known to be diseased may respond in the normal manner by contracting slightly after the cessation of moderate exercise. Hearts that give distinct systolic murmurs may withstand a Marathon race better than hearts apparently much more normal (Barach).

6. Extreme care should be given to the examination of the heart before and after moderate exercise in all who desire to enter severe athletic contests. Failure of normal reaction should bar anyone from such contests. Even those withstanding these contests well should have the heart examined at frequent intervals during their training to avoid overstrain. Many men weaken the heart muscle, instead of strengthening it, by continued overstraining. Riviere's observations, in 1909, on the effect of prolonged overstrain on young boys, which he found to result in the production of persistent cardiac changes, should serve as a special warning in care of the young.

7. Infectious diseases are especially liable to weaken the myocardium. For this reason severe athletic contests should be avoided by sufferers with or convalescents from acute infectious diseases, even of so mild a nature as tonsillitis or grip. "To work a cold off" by severe exercise is dangerous advice.

The question next naturally arises as to the condition of the heart in athletes who pass through one or more seasons of training and athletic contests without obvious symptoms of cardiac trouble.

To determine the extent of cardiac alterations in athletes at the University of Wisconsin, we have made an examination of the hearts of 45 athletes who have taken part in major sports at the university, and for the sake of control have examined the hearts of 20 nonathletic students. In both cases we have been guided in our selection merely by the desire to pick out men whose social and medical history gives no reason for assuming that extraneous factors have altered the normal structure or functioning of the heart.

Our studies show that, while acute cardiac dilatation of an immediate serious nature is not so frequent as one might expect among college athletes, marked cardiac hypertrophy is the rule rather than the exception, and that in a considerable percentage of cases functional disturbance of a more or less serious nature accompanies the hypertrophy.

The marked cardiac lesions found in so large a proportion of our college athletes present a serious problem, especially at a time when physical training is extending from the colleges to the secondary schools and the popular idea of a good physical trainer is so often the man who can turn out winning teams. While it is not desirable unduly to restrict healthy sports, on the other hand the leaders in athletic sports should not be called on to sacrifice too much the future for the present. The tendency in boys from 14 to 18 to develop cardiac lesions which are transitory, if the heart is not at this time subjected to overstrain, complicates the problem when extended to high-school athletes.

There seems reason to believe that at present there is an increase in cardiovascular disease in this as in most civilized countries. The relations of violent muscular exertion to such diseases should be thoroughly understood. The college athlete represents a type of special interest in this connection. During violent athletic contests he is stimulated by the excitement of the crowd to exert himself far beyond the point of physical comfort. Between seasons and when out of training he is apt to lead a more or less sedentary life, and this becomes usually the case after his athletic career is over.

The effects on the after life of the members of the college crews at Oxford and at Harvard have given rise to several studies, but the results are not of much value in throwing light on the general problem. They show in general that the crew men have lived a few years longer than would have been expected from mortality tables used by life-insurance companies, but accurate medical details are wanting, and we have as yet no good data on the life expectations of the picked classes from which the crew men have come. Perhaps the most significant tables are those of the Surgeon General of the Navy, who reports six deaths in athletes from diseases attributable to athletic overstrain to one in nonathletes among the select lot of young men trained at Annapolis. It seems reasonable to assume that a young man whose athletic training had led to cardiac hypertrophy with some functional disturbance likely to increase when the large heart no longer has exceptional work to do will be physically handicapped in life, to what extent careful study of numerous men is necessary to show. It will be found not only in the field of cardiovascular diseases, but also in the decreased resistance which such men show to acute infections, such as typhoid fever and pneumonia. Dr. Harlow Brooks in 1913, as medical officer of a regiment of the National Guard in New York, in which there are many college athletes from 5 to 15 years out of college, has found the health of these men on the whole decidedly inferior to that of the other members of the regiment.

### CONCLUSIONS.

1. Athletic training leads at first to physiologic hypertrophy of the heart; but when prolonged and marked by severer athletic contests it usually leads to hypertrophy plus dilatation of a variable degree, frequently marked by valvular insufficiency.
2. Functionally, the hypertrophied heart, even when dilated and giving distinct evidence of valvular insufficiency, may prove more fitted to carry the man through a severe athletic contest than a normal heart would be. On the other hand, acute cardiac dilatation occurs more frequently in athletes and men used to severe muscular strain than in normal men, and the ultimate effects are more prolonged and severe.
3. There is reason to believe that for normal human activities an "athletic" heart is distinctly disadvantageous.

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## IMPORTANCE OF REGULATED REST AND PLAY FOR SCHOOL CHILDREN.

JAMES D. LOVE, M. D., Jacksonville, Fla.

(*Southern Medical Journal, March, 1914.*)

In regulating the play of a school child I presuppose that this regulation extends to both the extent and nature of play, for while one child may participate with freedom in games entailing strenuous activity, another child should be permitted but limited indulgence in such, and for still another they should be altogether forbidden. Fatigue, consequent on overexercise, may, by depletion of vitality, awaken into activity a tuberculosis that previously had as its expression only enlarged lymph nodes. By fatigue the resistance of the poorly nourished child may be so undermined as to render it an easy prey to all infectious maladies. Strenuous play may prove disastrous and even fatal in cardiac disease, while selected and restricted play is to be commended.

The school child with a spinal curvature, with flat foot, with narrow chest, the hunchback, the mentally deficient, are all as much entitled as the cardiac patient to the supervision of a constant physical instructor. In this connection I would protest against the obviously unjust methods pursued by the physical directors of many of our public schools. One has but to visit the playgrounds of one of these schools to note the discrimination practiced against the very child who mostly needs regulated physical exercise. The physically fit and well-developed boy who scarcely needs the assistance of a director has lavished on him the most patient endeavors of an athletic trainer, who hopes, through the physical prowess of his young protégé, that honor may redound to himself and his school. The undeveloped and physically defective child, who has been briefly tried and thrown into the discard, is from every humane point of view more entitled to individual physical instruction and regulated play than the robust and promising young athlete. The pathetic side of this picture is seen in the wistful, longing eyes, the adulation and hero worship, depicted on the face of the little chap who is thus left to his own feeble efforts to work out the problen of his physical salvation. Till the needs and requirements of the school child are studied with a view to developing the weak, conserving the strong, and overcoming the deformities of the defective; till the child's capacity for play is measured and his need of rest is considered; till individual instruction and guidance are given these children under competent supervision, we can not hope for the results that should accrue from regulated rest and play.

While many of the foregoing remarks mostly apply to the growing boy, I should deem my duty but poorly fulfilled were I to omit some special reference to the crying need of regulating rest and play as applied to the developing schoolgirl. No one better than the physician can appreciate the menace to future health that attends the transitional period from girlhood to womanhood. We know that this period is an especially critical one among girls of delicate breeding, and that it must be surrounded by every safeguard to insure for her perfect physical development and future health and strength. During this period the amount of work and play should be carefully curtailed and regulated.

It is not the province of this paper to recommend the nature of play needful for even the average school child. This can only be ascertained by careful consideration of the individual child's capacity and needs. But I would protest against the coercive indoor gymnastics that constitute a part of the regimen of many of out modern schools. For the most part this is not only distasteful to the child but is fruitless of the very results that are hoped to be secured. Just as far as is consistent with the needful limitations and restrictions, a child should be accorded freedom in the selection of his exercise and play, for without a doubt the happy state of mind that attends a pleasing form of exercise contributes materially to the benefits derived therefrom. This especially applies to the normal child, who for a great portion of the time can rely on the promptings of nature to select and limit his exercise and play.

Many of our school children are incapable of prolonged and sustained mental effort without serious detriment to what is at best but an unstable nervous organization, and I am sure that for these children the study periods required in many of our public schools are entirely too long. In the minds of many of our teachers the idea still prevails that frequent recesses are forms of indulgence or special privileges to which only the brightest and best-behaved children are entitled. I deny the right of any teacher or disciplinarian to select as a form of punishment the curtailing of play which to every growing child is an absolute necessity. I contend that if a child must be denied recess or be "kept in" after school hours as a punishment for acts of omission or commission, then is our systen faulty indeed. Desire for physical activity is a predominant trait in every normal child, and associated with this is an equal desire to be amused. I indorse the views of Dr. Kerley, that among our school children "absence of proper amusement is the mother of crime," that amusement and play may be made as educational as we like, and that play of the right kind is always educational.

In closing I would refer to the absurdity of regulating the rest and play of the school child for eight months of the year and freeing him from restrictions and depriving him of guidance during the months of vacation. Any system of regulation of rest and play adopted by our public schools must, in order to be fruitful of best results, be continued without interruption during the entire period of school life. Neglect of this is, for the ends to be attained, just as irrational as to carefully regulate the diet of a child through the school months, and, freeing him from all restrictions during vacation, accord him free rein for such gastronomic indiscretions as are prompted by the caprices of appetite and fancy. Since it is not to be expected that children can be kept under the constant supervision of a physical director, especially during the months of vacation, it is necessary that parental cooperation be secured in order that instructions as to regulated rest and play may be carried out through the entire year. Public playgrounds have become a recognized essential in every large community and could be as appropriately utilized in the smallest towns. On every one of these playgrounds a clubhouse might be built and used not only for indoor amusements and physical training, but as a place for individual instruction of parents and children as to the nature and extent of play and the amount of rest suitable for every child.

## COMPARATIVE GROWTH IN CHEST CIRCUMFERENCE AND IN BODY LENGTH.[1]

WILLIAM CARLOS WILLIAMS, M. D., *Medical Inspector of Schools, Rutherford, N. J.*

(*Archives of Pediatrics, August, 1913.*)

In New Jersey the medical inspector of schools in any given district is asked to measure and record the circumference of the chests and the body length in all children once a year.

Turning the problem over in my mind during the regular yearly examination four things become apparent:

(1) That there is no normal size for the chest in either males or females at any given age; no standard by which a chest of a certain age may be judged and declared to be either larger or smaller than it should be, for at any given age there were chests of great variety as to circumference, all of them, as far as could be told, in healthy individuals. Also, I found that these chests were progressing along parallel developmental lines, one with the other, from year to year, at the same time retaining the original—I am to presume hereditary—circumference in relation to length of body.

(2) That in general there appeared to be a fairly uniform increase in circumference each year for all the chests of the same age, though at certain ages this increase in circumference seemed to be greater than at other ages.

(3) Furthermore, that at a certain age the boys' chests seemed to grow faster than the girls' chests, and vice versa.

(4) And, finally, that there was an inverse relation between chest growth and the growth in length of the body, and that in general this was most apparent at one certain age, which differed with the two sexes.

To see if this ratio actually occurred, I at once began to arrange and analyze the mass of figures I had collected during the examinations of that year and the one preceding. The results were chaotic.

Being convinced that this was due to inaccuracy in making the measurements I then began to work with the Bowditch table of measurements of American-born Boston school children, the results of which work are the cause for this paper.

These figures were compiled from American-born Boston school children—4,327 boys and 3,681 girls, from 7 to 16 years.

I took the number of inches gained in height and chest circumference from one year to the next in boys and girls separately, thus:

Gain in chest circumference between the ages 7 and 8—girls, 0.5; boys, 0.5.
Gain in body length between the ages 7 and 8—girls, 2.1; boys, 2.0.

Then dividing the gain in chest circumference by the gain in height (5÷2.1) we get a figure approximately 2, which will indicate the ratio between the development in height and chest circumference during that year.

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[1] General title of article: "The Normal and Adventitious Danger Periods for Pulmonary Disease in Children."

Proceeding in this way from Bowditch's figures we get then an average ratio for each year, one figure for the boys, one for the girls. These figures are as follows (for children 7 to 16 years of age):

| | 7-8 | 8-9 | 9-10 | 10-11 | 11-12 | 12-13 | 13-14 | 14-15 | 15-16 |
|---|---|---|---|---|---|---|---|---|---|
| Boys | 2 | 3.8 | 3.0 | 3 | 3 | 2.9 | 4 | 6 | 4 |
| Girls | 2 | 4.0 | .9 | 5 | 3 | 7.0 | 7 | 10 | 16 |

Consulting my table I found, as I had expected, that there was a minimum ratio between gain in chest circumference and gain in body length, which appeared at a different age in the two sexes, and that in each sex this minimum corresponded approximately to the period just before puberty in the two cases.

Thus, in girls we get a startlingly low factor between the ages of 9 and 10, while in the case of boys we get a less well-marked decrease in the factor between the ages of 12 and 13.

## HEALTHY SICK CHILDREN.

LE GRAND KERR, M. D., Brooklyn, N. Y.

(*New York Medical Journal, June 21, 1913.*)

Health is a relative term. Common usage is such that we speak of one who is healthy as one free from disease. The Standard Dictionary includes this as its definition. To be sick brings forth visions of disease or injury, but not necessarily so, because there are innumerable instances in which one feels sick or incapacitated and still remains free from disease. Only recently we have been apprised of instances in which dissolution took place and a careful autopsy failed to reveal disease of any organ, and the cause of death was unassignable. It is possible to be sick and remain free from disease, or, in other words, there are healthy sick persons. This is peculiarly true of childhood, during which functionating is so susceptible to influences from within and from without.

This is a decade in which more than in any other efficiency is being made a prominent part of all activity; along all lines efficiency is emphasized. The time places a responsibility upon the physician which he can not afford to shirk either from a social or an economic standpoint. In childhood especially we should be concerned, not with disease alone, but with the maintenance of every organ in perfect condition. Even this is not sufficient; it is good as far as it goes, but it does not go far enough. Perfect condition of every organ goes a long way toward the continuance of efficiency and the successful resistance of disease. But perfect organs are not absolutely essential to the continuance of good health, or even to the maintenance of the normal resistance of disease. A child may have one or more organs diseased, and yet remain in better condition than the child who has every organ perfect. And why? Because perfect functionating of an organ is far more important and necessary to life than mere perfection of structure. There must be coordination and cooperation between the several parts if efficiency is to be maintained, and the failure of one or more organs to act in harmony with the others is sufficient to make the child feel sick, although there be no disease present. Shall we disregard perfection of structure? By no means, but we have the habit of emphasizing it beyond its importance, and it is time that we gave the proper value to perfect functionating also.

For the child of these times physiological living is exceedingly important, and from a large experience with children the writer is convinced that normal efficiency is maintained and strengthened by physiological living. Physiological living will mean something different for each child, and in the same child may differ with the different periods of childhood. This is independent of the effect of the varying activities and influences which modify each period. To the infant it means mostly eating and sleeping; to the older child, play and unrestrained activities of mind and body; to the young person, the acquisition of knowledge and the pursuit of pleasure. This life must be lived in harmony with personal and individual peculiarities, whether they refer to sleep, to diet, to mental effort, or to physical accomplishment. No two children are exactly alike, and what will help one may harm another. It is therefore impossible to lay down more than the most general rules. But one general rule must be observed, and that is that the life must be lived in a manner to conduce to the harmonious action of all of the several organs, and to have this a consistent action and not by spells; to promote a continuance of perfect functionating of each organ and to have this accomplished as the result of habit, rather than of mental effort upon the part of the child. One thing is certain, that any scheme that aims to improve the efficiency of children is doomed to early and certain failure unless it is based upon the physiological fact that the pursuit of pleasure is a perfectly normal and commendable attribute of this period of life. And pleasure is not a matter of minutes or hours; it must be adapted to individual needs. The writer trusts that he has made it clear that the healthy sick child is not the victim of disease, or even of conditions that are associated with disease, although the latter may some time be the case, but is a subnormal individual who usually gets scant attention because his need is not emphasized by pathological changes.

In the treatment of these children there is demanded considerable patience to determine the exact fault, and considerable judgment as to how that fault may be corrected, because it is always and essentially an individual problem for the physician. There is always a need for the parent's intelligent cooperation, and this can be secured only by an explanation of just what we are aiming to accomplish. In addition, it may be necessary to adjust the child's diet to individual needs and administer such stimulants or tonics as are clearly indicated. In the great majority of cases the dietetic fault is either a deficiency of fat or the ingestion of food that undergoes putrefactive changes readily, or there may be a combination of the two. In giving a tonic the writer has found that it is nearly always desirable, if not absolutely necessary, to combine with it very small doses of tincture of digitalis, for this seems better than anything else to influence a sluggish or disturbed circulation and enhance the value of the selected tonic. This experience has extended now over several years. Despite all that we may do, some of these children do not respond to any treatment until they are placed in bed and kept there for at least a week or 10 days, and this fact is an important one to remember when we are not meeting with immediate success.

It is not the large things in medicine for which we are commended or condemned, but the little things, the details. The public expects us to do the larger things, but our knowledge of disease has often made us unmindful of the things that lead up to it, and familiarity with the complaints of the adult has perhaps led some to a contempt for their statements in regard to their children. If, however, the hint thrown out by the writer this evening is persistently heeded, the army of healthy sick children will be reduced materially, and some physicians will in time gain a reputation for accomplishing what the public will term "marvelous improvement" in children whom their colleagues disregarded because they did not present definite disease for treatment.

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## MEASURED FEEDING FOR OLDER CHILDREN.

Wm. R. P. Emerson, M. D., *Assistant Professor of Pediatrics, Tufts Medical School, Boston.*

*(Boston Medical and Surgical Journal, Jan. 15, 1914.)*

The feeding of infants has become an art made possible by percentage feeding of milk and other foods, the constituents of which have been determined with almost absolute precision. Indeed, exactness has been carried to such a degree that sometimes the physician's judgment is led astray by laboratory analyses. In the case of older children this condition does not obtain. In fact, food is prescribed by the physician in most indefinite terms, or else not prescribed at all. Such expressions as, "Give the child good, nourishing food, and plenty of it," or else "Be sure the child does not take anything indigestible" dispose of the whole question. Sometimes the physicians may ease his conscience by adding, "Not too many sweets and no tea or coffee." It seems superfluous to state that this method of dealing with the diet of the growing child is a poor one, but it is met with so often that it demands most serious attention. Someone has well said, "Why do physicians exercise so much care in prescribing drugs that are administered only occasionally and so little care in prescribing food which is taken daily?" This neglect of the proper supervision of the feeding of older children is responsible for many serious diseases of early life and especially for many disturbances of the nervous system that are most difficult to remedy.

For the proper feeding of the child, both physician and parent should have an adequate knowledge of food and food values. Three principal methods are in use for measuring food. In one, all food is divided in portions of 100 grams and tables are made out for the caloric values of each portion. This method is not readily adopted by either physician or parent, as it requires a mental readjustment of values, which is a serious obstacle to its success. We buy food by the ounce or pound. All infant feeding in this country is by ounces. The change into other standards of measurement renders the method impractical except for laboratory work. A second method consists in adopting the ordinary serving as a unit of measure. This method is incorrect, because what is an ordinary serving for one person is not so for another. This method also lacks an important factor present in the other two methods—namely, that of comparison, which is a great aid to memory. The third method, proposed by Irving Fisher in 1906, is called the caloric per cent method. Prof. Fisher prepared tables indicating the amount of food necessary to furnish 100 calories of food value, such amounts being used as standard portions. For example, one slice of bread has a value of 100 calories; also one pat of butter, or the lean meat in a lamb chop, or 5 ounces of milk, or one slice of bacon. These units or multiples of units represent very closely the amount ordinarily taken at one serving, so that food can readily be served according to this plan. It gives at first hand comparisons that help fix food values in the memory, the knowledge of a comparatively small number of which is sufficient to cover all our needs in any particular case. Sufficient information can be given in a short conversation to enable a person to raise or lower his diet 500 or 600 calories daily, which is an amount sufficient to cause a gain or loss in weight as desired.

For a child who is 6 to 14 years of age, 10 to 20 pounds under weight, and who continues his usual occupations, between two and three thousand calories of food per day are necessary for proper gain.

Having, then, a practical measure of food values, in order to make a child gain or lose body weight, the following steps are necessary: In the first place, we must secure the cooperation of the child. This can be obtained by what Dr. Morton Prince calls painting pictures. All girls want to be attractive and beautiful. They also want to do as other girls do—dance, swim, and play tennis. Every boy wants to be athletic. The desire to play baseball and football can always be aroused in him sufficiently to cause him to do almost anything to gain a good physical condition for that purpose. Next, there must be a sufficient control of the patient by parent or other person acting "in loco parentis" to secure a record of food taken and a regular report at stated intervals.

The preliminary record is of importance in this method of feeding. First, it shows how much food is habitually taken; second, it shows the kind taken; third, and more important still, it shows what the child likes and dislikes, making it possible to retain such foods in the diet as are agreeable to the child, simply substituting others for those that should not be taken, thus working along lines of least resistance, a most important factor in successful feeding. In the case of delicate girls, likes and dislikes, aversion to form, taste, or smell, or associations of certain foods with unpleasant events may be almost insurmountable obstacles in securing proper nutrition. Their appetites are fickle, leading them to live almost wholly on carbohydrate food, the proteid being far too low for proper growth. Cause and effect form a vicious cycle often made evident by this simple preliminary list.

The 48-hour record may also show mistaken ideas of parents as regards feeding. They frequently exhibit a certain pride in thinking that what does not agree with them will not agree with their children. Mistaken ideas of food values may lead to the total exclusion from the diet of many important articles of food.

Having from this 48-hour record a knowledge of the kind of food taken and its amount, it is an easy matter to increase or decrease the 24-hour intake by simple changes.

Such changes do not force the child to take too much food at any one meal, and therefore there is little danger of causing indigestion. In fact, in following delicate children with measured feeding I have seen no case of indigestion result. Children under weight seem to have a remarkable ability to digest food, taking as high as 3,500 calories without digestive disturbances. While, on the other hand, in the case of children who are overweight, symptoms of indigestion disappear in a remarkable manner with a diminution of the day's ration.

Measured feeding shows almost invariably that a child without organic disease is underweight because he does not eat enough and overweight because he eats too much. It is a far too common occurrence to find children taking tonics, transported to different climates, given all kinds of treatment to make them gain in weight, when a measurement of their food shows they are taking from 1,000 to 1,400 calories daily, an amount too small for them to possibly gain unless actually confined to bed.

In health the question of a proper proportion of protein, fat, and carbohydrates, namely, that of a balanced diet, needs attention only in a general way, as taste regulates this in most instances. For example, bread, which represents protein and carbohydrate, requires butter (fat) to make it palatable. Meat, composed of fat and protein, requires potato (carbohydrate) to please the taste. So the combination of bread and butter, meat and potato, bread and milk, represent physiological needs that taste recognizes and controls.

## COLD BATHS AND SLEEPING PORCHES.[1]

A. MORGAN MACWHINNIE, M. D., Seattle.

(*New York Medical Journal, Apr. 18, 1914.*)

The morning cold bath was not only a fad, but became a rage for a number of years. It is still followed by many as a most admirable procedure for toning up the nervous system; and so is the morning glass of whisky. Cold plunges are very much in evidence, even at the present time, in athletic house swimming pools and baths. In England the cold bath is very much in vogue, almost to the stage of fanaticism. It is often related that so and so broke the ice daily, when necessary, in order to obtain his cold plunge. If it were possible to measure the shock to the human mechanism and the extra work thrust upon the individual, what a change of sentiment would immediately take place!

No thought is given to the fact that the human body is a piece of mechanism which will stand but a given amount of strain. No greater shock was ever transmitted to this mechanism than we see at the swimming pools at a temperature of 70° F. This temperature, in itself, if continued for too long a period, adds more work to the internal organs. But for this to be followed, as we ordinarily see, by a hot shower and then by a cold shower, is the most abominable practice imaginable.

It is not to be wondered at that we see so many nervous systems wrecked; it is from nothing more or less than overstimulation. True, many persons are able to withstand this for a while, but the overstimulation is followed by depression, which must be counterbalanced by an overaction or regeneration through an increase of the physiological processes; metabolic changes of all the internal organs and their secretions follow. This, in turn, means a large consumption of food in order to take the place of the losses.

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[1] General title of article: "Two of the Present-Day Fads."

The physiological processes of the various organs are capable of doing a definite amount of work. Such work is governed by the amount, as well as the character of ingested material, and by the capabilities of these organs to produce the necessary conversion, or by their power and that of their secretions to convert this latent energy of fuel to usefulness.

Fresh air never harmed any individual when taken under proper conditions; and it is necessary for healthy existence. In this day we hear much about fresh air; this has resulted in the establishment of numerous sleeping porches, so called. Sleeping in the open air, under proper conditions, is to be commended; but under the conditions we ordinarily see, it is to be severely condemned.

Upon investigating 100 sleeping porches in this vicinity, the following conditions were found to exist: In 96 cases the sides of the sleeping balcony were partially protected from the wind and rain by a tarpaulin or some other material. Two had no protection whatever, and one was inclosed with glass windows which could be thrown open horizontally at night on retiring. This was the only one that could be closed in the daytime, and had hot-water radiators connecting with the boiler in the cellar that kept the bed and its covering as warm all day as the rest of the house. In 98 cases the bed, mattress, linen, and covers were exposed all day to the dampness of the atmosphere. Only 46 had tarpaulin to protect the bedcovers from the moisture. It is needless to say that this covering was insufficient for proper protection.

On interrogating the persons who occupied these sleeping porches the answer was that they found a considerable amount of dampness throughout the covers and mattress. A number found it necessary to warm the bed by hot flatirons; others used an electric pad. The nervous system should not be subjected to the shock which dampness produces, especially at night when we find our physical forces at their lowest ebb. The body must in all these cases furnish heat enough to warm and practically dry out the bed covers or linen before the individual is able to go comfortably to sleep. This again makes it necessary for all the physiological forces to work more than is natural at that time of night, in order both to dry out the bed clothing and to keep the body warm.

A chill is quite frequently the result, and it is some little time before normal equilibrium is established. This will not harm such individuals as are robust and able to overcome the shock; but there are those who are pale and anemic, and not so robust—persons whose physiological forces are not so easily aroused to excessive work, and are able to maintain only their daily physiological processes without being called upon for any additional strain in the form of drying beds, mattresses, and covers. When such people occupy sleeping porches as described, their physiological forces fail to exert themselves to do the additional things called for. The inevitable result is a lowering of the bodily resistance to the point where attack is easily made by the various diseases.

The suggestion offered for sleeping porches is that they be so arranged as to be completely protected from the weather. Doors should be large, so that the bed can be kept in the heated room during the entire day. When ready for the night, it should be wheeled to the sleeping porch, thus obviating the disadvantageous conditions previously described.

## RECENT DATA IN REGARD TO OPEN-AIR SCHOOLS.[1]

JOHN V VAN PELT, A. D. G., A. L. A., *Former Professor in Charge, College of Architecture, Cornell University.*

(*Interstate Medical Journal, April, 1914.*)

I have sent out inquiries to about 200 open-air schools. These are situated in 86 different cities, and I have had answers from about 90 of them.

I find that, of the total number of schools in the country, about 10 per cent are for normal children, 75 per cent for anemic children, and, in some cases, for those that are predisposed but with no marked symptoms of the disease, while 15 per cent are for tuberculous children. The last-named division includes a certain number of schools that are for bone and gland tuberculosis without admitting any cases of pulmonary tuberculosis.

While it is advantageous for social economy that there be preponderance of schools for anemic and incipient cases over those for cases in which the advance of the disease has become marked, it seems regrettable that there should not be an even larger proportion of schools for normal children.

Although a number of those that are subnormal or weakly have undoubtedly been so from infancy, or on account of very early lack of nourishment and care, there is a marked proportion that retrograde during periods that occur after they enter school. Just as care of the anemic and predisposed children lessen the number of those advanced in tuberculosis, so the open-air school for the normal would doubtless greatly lessen the number of those who would become anemic and develop incipient tuberculosis. Probably one reason that the proportion of schools for normal children and for anemic is so markedly in favor of the latter is that the movement is in its infancy, and the medical profession has made more effort for invalids than educators have for normal children. I have no doubt that this proportion is rapidly changing.

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[1] General title of article: "Open-air Schools in their Relation to Pulmonary Tuberculosis."

Another interesting comparison that has been shown beyond a doubt by my canvass is that there is a larger proportion of schools having no heat in the classrooms than of those having classrooms somewhat warmed. In other words, 57 per cent of the schools are entirely without classroom heat, and only the remaining 43 per cent are what have been termed "low-temperature rooms." In some of the latter, the heat is allowed to be turned on up to a limit of 65° F., which is unusually high. It is probable that the number of schools excluding heat is increased above what the figures indicate on their face, by the fact that California and a certain number of Southern States have rooms where heat would be unnecessary, even from the standard of those who believe in a "low-temperature" room.

From the descriptions I have received of the schools, it is apparent that some of the classrooms that are considered outdoor or open-window rooms, have windows only on one side; inadequacy of this provision is evidently recognized by the majority.

A large number of the schools for defined cases of pulmonary tuberculosis are in sanatoria, and an opinion expressed by the officers where recognized or advanced cases of tuberculosis are excluded—namely, that "a school is no place for such a case," may be very reasonably admitted, if by "school" we mean only places of instruction for children who are not tuberculous. It would be a pity, however, that no place of instruction be provided for well-defined cases of tuberculosis, and the children forced to remain in unhealthy tenements, while they might be taught and furthermore be cured instead of dragging on through a short number of diseased and contaminating years to a premature death.

Although my data are not entirely complete on this point, I should say that a large proportion of the schools furnish the children with some additional food, and a number of the schools furnish a dinner and two luncheons. In New York City a luncheon was furnished up to the present year, 1913–14, but has not been furnished this year. I find that in a few schools where no food is furnished, there exists a strong feeling that none should be provided. Dr. Walter W. Roach, of Philadelphia, voices this in his report to me.

In Boston another system prevails. The children are encouraged to bring a luncheon with them, and additional food of some kind is provided at a small cost. In certain schools, they are required to procure something hot—soup, chocolate, etc.

Just as superalimentation is one of the most important factors in stemming the advance of tuberculosis in the individual when under treatment as a patient, so it is for those in the early stages who are predisposed or tuberculous, and in school, instead of in a clinic or sanatorium.

As we saw in the theoretical discussion of this subject, outdoor life will bring about greater power of assimilation and greater need of fuel supply.

It is difficult to say just where paternalism should be excluded, and it would seem wiser, in the case of all children where the disease has announced itself in any way, to forestall a greater expense in the sanatorium or hospital by supplying requisite nourishment in anticipation.

Finally, I have found that in a few schools there is lack of medical supervision. For normal children such supervision is not so important; but I do not believe that even the ordinary school should be without regular medical inspection, and when it becomes an open-air school, such supervision should never be dispensed with. Careful comparisons of the weights, gain in hemoglobin, and gain in mental power of the children, should be recorded and filed for comparison.

It would be of great value if more experiments, ranging over long periods of time, could be made in emulation of those made by Dr. Roach and in a few other districts. If such were instituted in different parts of the country, so that results in California could be compared with those in Pennsylvania and New York, control warm-air classes being compared with open-air classes, and with "open-window" or "low-temperature" classes, all under carefully balanced conditions, some certain knowledge could be adduced.

The most encouraging thing that is shown by the canvass just made is the continued growth in number of open-air schools. It not only means that fresh air in the schools has come to stay, but that fresh air in the home and in the community will soon be on the increase.

## ON THE RESPIRATION OF EXPIRED AIR.

THOMAS R. CROWDER, M. D., Chicago.

(*The Archives of Internal Medicine, October, 1913.*)

The immediate reinspiration of a portion of our expired air occurs quite commonly—so commonly, in fact, that it is an accompaniment of respiration during the major part of the lives of practically all. I have made the attempt to determine some of the factors controlling this phenomenon. The work has included the analysis of some 900 samples of inspired air.

[Then follows a discussion of his experiments.]

The experiments represent only such conditions as are likely to be met with in daily life. With the single exception of the closet, the rooms utilized were well ventilated. Many times the air supply was excessive. The attempt has been made to determine what kind of air is breathed under ordinary and good conditions, rather than what may be breathed under exceptionally bad conditions. It may be fairly concluded that when one lives indoors and remains quiet he will immediately rebreathe from 1 to 2 per cent of his own expired air. When he goes to bed it will be more—from 1 or 2 per cent to 4 or 5 per cent, depending on the position in which he lies. In some of the positions assumed by people sleeping it may even be as high as 8 or 10 per cent, and I have once found it 18 per cent in a single test, which did not necessitate a position by any means improbable. Nor does sleeping in the open insure pure air for breathing. The same influences here produce the same relative results that they do inside. When one buries his head between pillow and bedclothes for the sake of warmth, reinspiration is inevitable, and it is not necessarily small in amount.

[Then follows a discussion of the physiology of respiration.]

It is commonly, though erroneously supposed, that the good effects of efficient ventilation are due to the chemical purity of the air. When attention was called to the occurrence of immediate reinspiration, it was looked on as a newly discovered source of impurity in the air we breathe. To this previously unrecognized source of contamination was attributed much of the failure that has so often attended attempts to bring comfort out of ventilating procedures, and from this has arisen the "theory of displacement" in its application to ventilation. Accepting the old notion that chemical purity is a proper basis for ventilation standards, and assuming that reinspiration is necessarily harmful, some of the hygienists propose to handle the air supplied to a room in such a manner that the expired air will be immediately carried away from the face and can not be rebreathed. It is asserted that, if the new principle is applied, a much smaller quantity of air than is demanded by the older quantitative or dilution standards can be made to yield hygienic results. But smaller quantities of air do not lend themselves readily to maintaining the currents that have been shown to be necessary in order to accomplish the displacement aimed at. Or, if the necessary currents are maintained, and throughout a sufficient area to be effective, it becomes a physical necessity to recirculate the air; thus only delaying rather than preventing reinspiration, and reducing the system to one of simple dilution, which it is the avowed purpose to avoid. By actual experiment I know that the plan most widely heralded does just this thing so far as the contamination of the air of a room is concerned, and it is improbable that immediate reinspiration is materially restricted. The theory of displacement does not sufficiently take into consideration that all animals possessing lungs ventilate them on a very simple principle of dilution; nor does the pure-air theory sufficiently consider that the air of the lungs always remains highly contaminated with their own excretory gases, and that there is such an effective barrier as the dead space against the lowering of the contamination.

If it is derived to prevent reinspiration, ways have been indicated by which this may be done. The results will be good, bad, or indifferent, according to the plan chosen; but in no case will the results, whether good or bad, depend on the fact that reinspiration is prevented. Within a wide range of variation in the purity of the air we breathe (in so far as the purity is effected by the products of respiration), the respiratory function is perfectly adapted to maintain its normal balance. The only apparent effect of rebreathing a little of our own expired air is a slightly deeper inspiration.

But ventilation is not a matter of little consequence because of this. It is still just as important as it has always been considered; the benefits of fresh air and the outdoor life are beyond question. But these measures should be carried out in the interest of the heat economy of the body rather than with regard to the chemical purity of the air we breathe. The good effects of the outdoor air depend on its coolness, its motion, and its relative humidity. These physical qualities enable it to absorb the heat which is constantly being formed in the body, and which must be as constantly removed. Air that will take it up rapidly will stimulate healthy functions; air that takes it too slowly leads to sluggish metabolism, and if maintained will ultimately result in a low resistance to disease.

The rigor of a temperate or a colder climate makes of its inhabitants a house-dwelling race. They very commonly overheat their houses, if not by fire and steam, then by the heat of their own bodies; and when they do this they complain of poor ventilation, regardless of whether the air supply is large or small. Whichever this may be, under any conditions that are likely to arise, there will still be oxygen in excess of every demand, and the $CO_2$ will still find a ready escape from the blood; but in an overwarm atmosphere the body will be stagnated and the consumption of oxygen by the tissue cells will be decreased. Ventilation is necessary in order to maintain the thermic balance of the body and to stimulate its chemical activity; and ventilation with cool air is especially desirable. A little extension of the dead space beyond the tip of the nose is of no consequence. In spite of this extra contamination of the inspired air, the proportion of $CO_2$ in the alveolar air will remain a little lower in a warm room than in the invigorating cold of the out-of-doors, as has been shown by Boycott and Haldane. It will remain so, because metabolism is reflexly retarded by a warm aerial envelope, the consumption of oxygen by the tissues and the production of $CO_2$ by them being much less in warm air than in cold.

That this discussion concerning the significance of reinspiration applies only to healthy persons scarcely needs to be added. The capacity of the lungs may become so restricted by disease that the slightest addition to their work is undesirable. But when we learn that they are still capable of performing the respiratory function with the capacity reduced to so little as one-sixth of the normal, the margin of safety is seen to be a very generous one.

## THE AIR AS A VEHICLE OF INFECTION.

Charles V. Chapin, M. D., *Superintendent of Health, Providence, R. I.*

(*Journal of the American Medical Association, Feb. 7, 1914.*)

A vast amount of work has been done to determine the resistance of different kinds of bacteria to drying and their vitality in dust. The factors affecting the life of pathogenic micro-organisms outside of the body are so numerous that it is not surprising that quite discordant results have been obtained by different observers. Certain it is that some bacteria, as those of cerebrospinal meningitis, gonorrhea, and influenza, die so quickly that their carriage on dust is practically impossible. On the other hand, the resistance of tubercle, typhoid, and diphtheria bacilli is sufficient to admit of their floating on dust particles. On account of the mechanical obstacles in the way of explaining how substances so difficult to reduce to fine dust as feces and sputum could be dust-borne, other modes of infection were sought for, and in 1897, Flugge showed that infecting bacteria could be carried in the fine droplets of saliva which are thrown from the mouth during loud talking or coughing, but which are absent during quiet respiration. It had previously been shown that bacteria-holding droplets could be thrown into sewer air by the agitation of sewage, and this experimental work had perhaps suggested that similar droplets of saliva might be a means of spreading disease from person to person. The followers of both Cornet and Flugge inferred much more from the work of these investigators than was warranted, or than was claimed by the authors themselves. Because Cornet's guinea-pigs become infected by clouds of tuberculous dust, and Flugge's pigs contracted tuberculosis when held a short distance in front of a coughing consumptive, one is not warranted in assuming that either dust or droplets are, under natural conditions, the chief mode of infection in tuberculosis, and there is still less warrant for such an assumption for other diseases. There is still less reason for assuming that, because bacteria are observed to fall on agar plates from the air of a room, the air is infectious, and no reason at all for the assumption that because a few diphtheria or tuberculosis germs survive drying for three or four weeks, diphtheria or tuberculosis are dust-borne diseases.

The question of dosage in causing disease is an all-important one, though it has usually been neglected in bacteriologic work on aerial infection. Winslow, however, appears to have fully recognized the importance of quantitative work, and his careful and extensive experiments on sewer air and on dust and the air of schools and dwellings has served to explain much of the contradictory work of other and to bring bacteriologic and clinical observation in accord. Winslow's first quantitative work was on sewer air. In 1907 careful experiments were made by Winslow in this country and by Horrocks at Gibraltar. The latter succeeeded in recovering the colon and also typhoid bacilli from the soil pipes of the barracks under quite natural conditions, and, though the number was not determined, he was believed by many to have thus demonstrated the dangerous character of sewer air. The number found by Winslow was so small that he deemed it necessary to make further observations. In nearly 200 liter samples of air from the soil piles of various buildings in Boston, he found sewage bacteria only four times, and only when there was splashing of sewage at the place and moment of examination. In such air as would be likely to escape from a drainage system, either from the vent pipe or from an opening into a house, such bacteria were never found. Under ordinary circumstances, pathogenic bacteria, such as the typhoid or dysentery bacillus, must be far less numerous than are colon bacilli. The entire absence of the latter from 193 liters of sewer air, taken elsewhere than in the immediate vicinity of splashing, shows how slight must be the danger from this source.

Later, experiments were made by Winslow and Robinson to determine the extent to which general air infection in an apartment is caused by droplet infection. Out of 140 liters of air taken at various points in the room immediately after from 10 to 50 minutes loud speaking by a person whose mouth was infected with *B. prodigiosus*, the bacillus was found seven times. Of 74 liters examined for *streptococcus salivarius*, none were found to contain this normal inhabitant of the mouth. The authors consider that an artificial infection of the mouth may give too high an index of air contamination, while the normal germs of the mouth may be thrown off in smaller numbers than are the disease germs from sick persons. The authors conclude that these experiments furnish "no basis for a belief that tuberculosis or any other disease is contracted to appreciable extent through the inspired air" and are "in harmony with the conviction now generally gaining ground that aerial infection of any sort is a minor factor in the spread of zymotic disease."

Still more recently Winslow has made quantitative studies of acid-forming streptococci in New York City schools. He says:

> It is well established that acid-forming streptococci are among the most abundant forms in the human mouth, while they are absent from sources which have not recently been exposed to human or animal pollution. The numbers of these organisms in

schoolroom air were found by Prof. Baskerville and myself in preliminary experiments a year ago to be quite small. We then found among 30,000 colonies isolated from 750 plates, exposed in schools with window ventilation, only 10 mouth streptococci.

In the present study in the examination of a total of 868 cubic feet of air, we found 52 mouth streptococci, or 6 for every 100 cubic feet of air.

A child breaths less than 100 cubic feet of air during an average school period, and these mouth streptococci must, of course, be far more abundant than pathogenic forms. At a rate of four or five mouth streptococci per day, the chance of ingesting pathogenic bacteria from the air is seen to be a very slender one.

Although Winslow found so few of the bacteria of human saliva in the air of schoolrooms, on another occasion in various schools in this city he found them in dust to enormous numbers, even up to100,000 in a single gram. This shows that the presence of germs in indoor dust, representing as it does, long-continued precipitation, is no indication of the number floating in the air, and it indicates the worthlessness of the deductions which have often been made as to the danger of air-borne infection, from the mere demonstration of the presence of disease bacteria in dust.

While bacteriology has given us facts instead of theory as to disease causation and has made a science of sanitation, bacteriology alone can not solve all our problems. The study of micro-organisms, pathologic findings, animal experiment and epidemiologic observations, must all be utilized and harmonized to solve the problems of disease transmission. It is for us to trace the effect which modern research has had on the old belief that practically all the infectious diseases are air-borne.

[Then follow discussions of typhoid fever; cholera, dysentery, and diarrhea; aseptic surgery; malaria and yellow fever; typhus fever; smallpox; plague; pneumonic plague; Mediterranean fever; influenza; pneumonia; scarlet fever, diphtheria, measles and whooping cough; chicken-pox and rubella; tuberculosis; anthrax.]

After this review a summary scarcely seems necessary, or even a formal conclusion. We have seen that a number of important diseases, formerly considered exclusively air-borne, have been shown never to be such. There is little evidence that, among the diseases which commonly occupy our attention in this part of the world, aerial transmission is a factor of importance. In most it is, under ordinary conditions of home and hospital, a negligible factor. For tuberculosis alone is there evidence that air-borne infection is a factor of moment, but the last word has not been said as to the etiology of this disease. We may be sure that the sewer-gas bogey is laid, the notion that dust is a dangerous vehicle of every-day infection is unsupported, and that mouth spray is usually effective only at short distances.

## A NEW METHOD OF DETERMINING THE DUST IN AIR AND IN FRESH-AIR SCHOOLROOMS.

JOHN B. TODD, M. D., Syracuse, N. Y.

(*New York Medical Journal, Feb. 28, 1914.*)

After many experiments the following method has proved satisfactory in giving a positive objective answer to the question of how much dust there is in the air: A canton-flannel disk $2\frac{3}{16}$ inches in diameter is placed in a receiver which has a round opening 1 inch in diameter. Through this, by means of a suction pump, 200 cubic feet of air are drawn. On removing the canton-flannel disk we have the dust record. For the purpose of standardization a scale of 10 gradations, from white to black, has been made. The pump used was a rotary quadruple bellows pump from a Melville Clark player piano. Mr. Morgan Sanford, of the local station of the United States Weather Bureau, standardized the apparatus and found that 200 cubic feet of air are drawn through the apparatus in 23 minutes. The pump used is very efficient and noiseless in operation, but it is too heavy. I am working out one that will be portable.

I am satisfied, since I have used this objective method of dust determination, that we have greatly underestimated the effect of breathing dust as a cause of ill health and disease, and I hope to see the time when it will be as essential to make a dust record of the air a patient breathes as it is to take blood count and pressure. I have found that it reveals dust conditions of the air that many times were entirely unsuspected, but, when once detected, the source of the dust can generally be determined and the means to exclude the dust devised.

Many times in schoolrooms in which the conditions seemed ideal very dark dust records would be obtained. Generally a muddy playground would account for the dust, mud being brought in upon the children's feet, when the warm air of the schoolroom would quickly convert it into dust. The old methods were to *clean out the dust* with dust cloths and vacuum pumps. The dust records enable one to locate dusty places and conditions and suggest methods of preventing dust. Prevention is a nobler function than cure, so the new words will be, *keep out the dust*, and the standing of schools in dust elimination can be kept on score cards by means of the dust-record scale. In that way principals and janitors will be spurred on to greater efforts in maintaining a high record for freedom from dust. The educational value of this way of living hygienically in the schools will react upon the homes and entire community.

It is generally the custom to close the school and fumigate when cases of contagious disease occur among the pupils. It would be a much greater sanitary practice to scrub the floors, walls, and ceiling, to make them absolutely free from dust.

I have been making a study of air conditions, both in fresh-air (screened windows) schoolrooms and rooms ventilated in the conventional way. The fresh-air schoolrooms are rooms in which the lower sash is raised in four or five windows and the opening fitted with a wood frame covered with medium-weight unbleached sheeting. The room in which the experiment was first tried had five 36 by 40 inch windows facing the east. Steam pipes extended across the room under the windows, and a hot-air inlet, 30 by 30 inches, was on the north side, midway from the floor to the ceiling, with an exit opening of the same size near the floor. In the morning before school opened the room would be warmed by hot air driven by a fan. When school began this hot-air inlet would be closed and all the windows opened, so that there would be 50 square feet of open window space covered with the screen. The cold fresh air would diffuse slowly into the room and would be met by the hot air rising from the steam pipes, so that there were no perceptible drafts. Children sitting within 4 feet of the open windows all the winter days experienced no inconvenience whatsoever. The temperature of the room was maintained at 68° to 70° F. as easily as before the screens were used. There are two reasons for this: First, glass is a great conductor of heat and cools the bad air in a room very rapidly, while cotton conducts only one-twentieth as much heat; second, if the air is being slowly diffused into the room there can be no heat loss from radiation or conduction through the screens, and as it takes no more heat units from the steam pipes under the windows to raise the temperature of the air being slowly diffused into the rooms than it would to heat the same air by the heating coils in the fan room the use of the screens is a clear gain of the heat loss by radiation through the glass of the windows. Another economy obtained from the use of the screens is the saving of power and attendance.

After the screens were installed in this room no more cases of fainting occurred; hacking, coughing, and restlessness disappeared; discipline was easier to maintain; and the children did better work. The windows were up during all kinds of weather; the coldest day of the winter the thermometer was at zero at 10 a. m., while it was at 70° F., with 50 square feet of screened opening in use. The principal, janitor, and all the teachers were at first incredulous, but frequent observations of the conditions soon had them all asking for screened windows. The idea has spread to other schools, and whenever the screens have been properly constructed and installed the improved air conditions have been ideal. A critical examination of the ideal air conditions in these fresh-air rooms reveals a scientific basis. In the first place, drafts are currents of air with velocity enough to be perceived, and if the air is cold they are uncomfortable or painful. The screens are covered with cloth heavy enough to prevent any perceptible draft. In fact, it is a permeable membrane which breaks up the air into currents of infinitesimal size and of low velocity, but to obtain any ventilation under these conditions the area of opening must be very large; so I put 50 square feet to the room, which is nearly double the area of the inlet opening to the fan which is supposed to furnish air for 16 schoolrooms, an assembly hall, etc.

Repeated humidity tests have shown that it is practically the same in these fresh-air rooms that it is out of doors, which confirms Hobler that it can be obtained as easily by open windows as by a humidistat.

Believing that carbon-dioxide tests are not worth the trouble of making, the carbon dioxide has been ignored.

One would think that by filling the lower sash of all the windows in a schoolroom with cloth screens the proper lighting would be decreased, but, instead, the lighting is really improved. The light rays are broken up by the cloth and a soft diffused light results, which is more comfortable to work by than the glaring direct light that comes through glass.

The fresh-air rooms are absolutely free from odors, which are so closely associated in our minds with schoolrooms and institutions. Even the smell of stuffiness which can hardly be called an odor is entirely absent. It is, as one teacher has described the air conditions, "like a continued day in June."

Next to the confined, stuffy, bad air in schoolrooms, the dust in the air produces the most insanitary condition. In ordinary fan-ventilated schools the dust that is brought into the room gradually accumulates, the room acting as a settling tank, while only a small portion is carried out by the vent. I have found in the screened fresh-air rooms that this dust is entirely eliminated. This dust elimination is accomplished in two ways. First, the fan inlet being closed, no dust is brought into the room by the fan; second, the air that is diffused into the rooms through the screens is *filtered air* and dust free. The cloth on the screens becomes discolored very much after a time and should be changed for a new cloth. I have worked out a form of screen in which the cloth can be changed with little trouble. Wire gauze and cheese-cloth window screens have been used a great many years, but they have proved unsatisfactory in cold weather because they produce cold drafts.

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## COUNTRY SCHOOL SANITATION.

FRANCIS G. BLAIR, *State Superintendent of Public Instruction, Springfield, Ill.*

*(Illinois Medical Journal, August, 1913.)*

I am to speak to you on one special item of work which is now being done by the department of public instruction for the improvement of sanitary conditions in the rural schools of Illinois. The plan is a very simple one and can be very briefly stated. The law makes the superintendent of public instruction the supervisor of all the common and public schools of Illinois. It makes him the adviser of school officers. On this legal authority the superintendent of public instruction has appointed two country school supervisors who have entered on a campaign to better the physical and instructional conditions of the one-room country schools. Two diplomas are prepared by the State department, one for a standard one-room school and the other for a superior one-room school. The standard diploma is awarded to any school which meets a certain minimum requirement. This minimum standard requirement as it relates to the physical and sanitary conditions is as follows:

Yard and outbuildings:
  1. Ample playground.
  2. Good approaches to the house.
  3. Two well-kept, widely separated outhouses.
  4. Convenient fuel houses.

The schoolhouse:
  1. House well built, in good repair, and painted.
  2. Good foundation.
  3. Well lighted.
  4. Attractive interior decorations.
  5. Good blackboards—some suitable for small children.
  6. Heated with jacketed stove in corner, or a room heater and ventilator in corner or basement furnace which brings clean air in through the furnace and removes foul air from the room.
  7. Floor and interior clean and tidy.
  8. Desks suitable for children of all ages, properly placed.
  9. Sanitary water supply.

In order to secure the superior diploma the following additional requirements must be met:

Grounds:
  1. Playgrounds at least one-half acre and kept in good condition
  2. Some trees and shrubs.
  3. Well or cistern and sanitary drinking appliances.

House:
  1. Separate cloakrooms for boys and girls.
  2. Lighted from one side or from one side and the rear.
  3. Heated with basement or room furnace, which brings in pure and removes foul air.

The country school supervisors go into the counties on invitation of the county superintendent. They visit the schools and examine personally the physical equipment. Along with the diploma goes a label which is prepared by the department of public instruction for the door of the schoolhouse. The label has printed in gold on a black background "*Standard School*" or "*Superior School,*" in such type that it can be read at a distance of from 200 to 300 yards. This appeal to local pride has been far more successful than was anticipated when the plan was formulated. The supervisors have awarded diplomas to over 1,100 standard schools. Four diplomas have been awarded to superior schools. These diplomas are renewable for five years. Each year there must be an investigation to see whether the school has been kept up to the standard. If in any instance the pupils, teachers, or directors grow indifferent and allow the equipment to deteriorate, the diploma is withdrawn. It is believed that this plan not only improves the condition in the schools which are able to meet the requirements and receive the diploma, but it goes farther and improves certain conditions in many schools which can not meet all the requirements. There are hundreds of schools which can not receive a diploma so long as the present building remains, which have from the suggestions offered improved some conditions, say, the character of the water which the children drink, or it may be that they have been able to change the seats, or the heating plant, or to comply with one or two of the requirements set forth. This work, it will be seen, is entirely optional on the part of directors from the district and results from a desire on their part to follow the suggestions of those in whom they have confidence and to place their district on an equality with surrounding districts.

## A METHOD OF OBTAINING PROPER SCHOOL SANITATION.

Louis Becker, M. D., Knoxville, Ill.

(*Illinois Medical Journal, August, 1913.*)

A number of years ago, while on the school board of my home town, I had to do with the building of a school building. The school board in this case went into the sanitary features very fully, and especially into those of ventilating and heating. Careful anemometer tests under all conditions of weather showed that we got 1,500 cubic feet of fresh air for each pupil every hour as a minimum. This air was taken from outdoors, warmed, and introduced into the rooms through openings 6 feet above the floor, with suitable exits at the floor line. The rooms were so arranged that they could be heated and lighted properly. We also, while in the business, changed the old school building, built in 1875, so as to supply 1,200 cubic feet of fresh air each hour to each child of a room full. In time it became necessary to replace the heating system in the newer building, and the school board, composed of our best business men, knowing nothing of ventilating problems, replaced the indirect heating with direct; carefully removed the fresh-air room, bricked up the openings for transmitting the warmed air for the rooms, until now the only chance they have to get fresh air is to open the windows occasionally and freeze the pupils nearest the window, then shut them down and wait until the air becomes noticeably foul. Now our children are suffering because good-intentioned men did not understand and should not be expected to supervise sanitary problems.

At the same time the radiators in the warming flues in the old building began to leak and the janitor was told to shut them off. To prevent admitting cold air to the rooms he was obliged to close the ventilating windows, and now this building has no ventilation whatever. We certainly have no moral right to enforce compulsory school attendance on children during their most sensitive years in our town. A child has a right, above everything else, to have healthful surroundings. From an educational standpoint it is certainly not good practice to give him instruction in hygiene in a classroom which violates important hygienic rules. The child who sees a proper regard paid to cleanliness in its best sense, to light, to pure air and water in the school will be apt to carry the lesson home. Proper instruction, together with proper example in our schools, has a tremendous effect on the homes from which scholars come. In no other one subject will its effects be as noticeable as in those of proper sanitation by example.

At one time I thought that the solution of these difficulties would be in having a physician on every school board. Such a condition, however, is difficult to bring to pass, and considering the ignorance of many physicians as regards the practical application of sanitary needs in the case of schoolhouses, I am sure it would not be a success. Some time ago I thought of making public suggestion that State authority should supervise the sanitary arrangement and safety appliances in all new buildings and in all old buildings undergoing changes. I supposed this idea was original, but there is nothing new under the sun. Two bills introduced in the State legislature are now being considered which purpose to solve the problem in this way; making the plans of school buildings subject to approval of the State architect, the State board of health, and the State fire marshal.

If my experience has proved anything at all it is that no set of men in any ordinary town can be left with the problem of erecting a school building that may be safely attended by your child and mine. Proper sanitation is and always will be the most important thing about a school building.

Very fortunately our one-room country schools can have suitable heating and lighting without much expense, and I have been astonished at the number of country schools around my home town which have complied with most of the ideals. Pure drinking water and suitable water-closets are much more difficult to obtain in these small schools.

## CONCLUSION.

I can not conceive of any really serious objection to compelling the submission of all school plans, whether for new buildings or for changes in old buildings, and to a certain extent school equipment, to proper State officials who by training have an adequate knowledge of school needs.

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## CLEAN BOOKS.[1]

WILLIAM R. REINICK, Philadelphia.

(*American Journal of Pharmacy, January, 1914.*)

The process of killing germs in books by disinfection, although recommended, especially by those who have the disinfectants and the apparatus for sale, may be dismissed as of very little use, on account of the impossibility of the gases penetrating into the interior of the volumes, and in no case, even if the entire surface is reached, will they remove all of the spores.

Both steam and hot-air sterilization are of little value for books, because the first will cause the paper of the books to absorb the moisture, swell, and deform; while in the case of hot-air sterilization, the heat would, by drying up all the moisture in the books, have the same effect, besides in the case of books bound with leather, cause the leather to stretch and often break. The heat also will absorb the moisture, and the paper will become dry and brittle, lessening the life of the volume.

At present I do not believe that there is any method which may be depended upon to entirely eliminate the possibility of diseases being contracted through fomites, such as books and the hundreds of other articles in daily use, constantly being transferred to a sick room, returned and ready for another victim. I believe that some of the State boards of health are now beginning to recognize the futility of quarantining and disinfecting. Instead, they are spending all their energies in improving sanitary conditions as to the necessity of cleanliness and the proper care of health. If persons using books or any other of the numerous articles named as conveying germs will use precautions as to the degree of cleanliness of the article they handle, and will take proper care of their health, they need have no fear of contracting any disease by means of a book or any other article.

The same care that should be given to keeping the books clean should also be insisted upon for the employees and readers of libraries and all places where dust may accumulate.

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[1] General title of article, "Books as a Source of Disease."

A visit to almost any library will generally show, by placing the hands in back of the books upon the shelves, that there is a great deal of dust lying there. Very few libraries, even those recently erected, have had the vacuum system, which seems to be almost perfected, installed. Instead of making the reader wash his or her hands before using a book, it is very difficult for one to obtain access to the lavatory to wash his hands even if he so desires. In fact, there are some libraries which have no lavatories at all for the public.

Books are often placed on shelves in stacks, poorly ventilated and lighted. * * * Not disinfectant plants, but sunlight, fresh air, the elimination of dust, and the proper cleanliness on the part of the employees and readers, are the means, not only to prevent books from becoming fomites, but also the people from becoming carriers in this age of prevention

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# ORGANIZATION OF STATE DEPARTMENTS OF EDUCATION

rthur oleman
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# LETTER OF TRANSMITTAL.

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DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
*Washington, November 17, 1914.*

SIR: As State appropriations for education increase, the feeling of need for a better organization and a more effective supervision of the schools of the States grows, and with it grows also the interest in the organization and functions of State boards of education and the selection and duties of the chief school officers of the States and the equipment of their offices. Many requests come to this office for information on these subjects. To assist in answering these as fully as possible, I recommend the publication of the accompanying manuscript, *Organization of State departments of education,* as a bulletin of the Bureau of Education. This manuscript has been prepared at my request by A. C. Monahan, specialist in rural school administration in this bureau, on the basis of studies made by Wickliffe Rose while he was serving as general agent of the Peabody Education Fund, and a compilation of laws made by William R. Hood of this bureau.

Respectfully submitted.

P. P. CLAXTON,
*Commissioner.*

The SECRETARY OF THE INTERIOR.

# ORGANIZATION OF STATE DEPARTMENTS OF EDUCATION.[1]

## STATE BOARDS OF EDUCATION.

The trend of educational development is toward the State board of education as the administrative head of the educational system. In 37 of the 48 States in the United States there are State boards of education with functions relative to the public schools; in one other, Minnesota, there is a State board with functions relative to the public high schools only. In the other 10 States, namely, Alabama, Illinois, Iowa, Maine, Nebraska, New Hampshire, Ohio, South Dakota, Wisconsin, and Wyoming, there are no such boards. Two of these 10, Nebraska and Iowa, have State boards known as boards of education. The Nebraska board has charge of the State normal schools and has no other functions; the Iowa board has charge of the State institutions of higher education, including normal schools, but has no functions concerning other schools. The State boards in Arkansas, Pennsylvania, and Vermont have been created by laws enacted within the last four years. During the same period the boards in Arizona, California, Delaware, Georgia, Idaho, Indiana, New Jersey, North Dakota, Oklahoma, and Washington have been reorganized in the interest of greater efficiency as a result of State legislation.

*Composition of the State boards of education.*—The composition of the boards in the various States is shown in the accompanying table. The ex officio members and the appointed or elected members are shown separately. The present trend in educational development is toward a board composed of persons who have some knowledge of the business which they are to administer. This does not mean necessarily persons actually engaged in educational work; it means that the tendency is away from the ex officio boards composed of State officers without special educational qualifications.

It will be noted that, of the 37 States with State boards of education, 8 still hold to boards made up of ex officio members, officers at the State capitol. These are Colorado, Florida, Kentucky, Mississippi, Missouri, North Carolina, Oregon, and Texas. These ex officio boards are usually composed of the governor, the superintendent of public instruction, and one or more other State officers, such as the secretary of state, attorney general, treasurer, auditor, lieutenant governor, or comptroller of the treasury. In Colorado and Kentucky the governor is not included; in Texas the State superintendent is not included. Nevada has an ex officio board that includes the president of the State university. In 10 other States the board is composed of ex officio members at the State capitol and members appointed at discretion by the governor. In 5 States the boards are appointed by the governor and include no ex officio members; these are California, Delaware, Massachusetts, New Jersey, and Vermont. The New York board contains no ex officio members, but is elected by the legislature. In 17 States the governor is a member of the board.

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[1] In the preparation of the descriptive part of this bulletin free use was made of a manuscript written in 1913 by Wickliffe Rose, director of the Rockefeller Foundation International Health Commission, to accompany the tabular exhibits (revised up to date) relative to the State boards of education and chief State school officers contained in the report of the Illinois Educational Commission published in 1909.

It will be noted that in 7 States the president of the State university is ex officio a member of the board of education. In 5 States the president of the agricultural and mechanical college is also a member, and in 4 the normal schools are represented on the board ex officio by one or more members. Indiana designates the superintendents of the three largest cities of the State as ex officio members.

*Appointment of the State board of education.*—The drift is toward appointment by the governor, with restrictions to guard against arbitrary use or abuse of the appointing power. Of the 28 States with State boards containing appointive members, 22 leave the appointment with the governor, subject in some cases to approval by the State senate; 4 States leave the matter with the State legislature; 1 State puts it to popular vote; and in 1 State it is left to the State superintendent.

The appointed or elected members are composed both of men in educational work and men not in educational work. In 4 States only men engaged in educational work may be appointed; in 7 States a certain number of men not engaged in educational work must be appointed; in 12 States the laws do not specify, but leave the matter with the appointing body. The tendency seems to be in these States to appoint both educational men and others. These appointments may be made with the view of getting men adapted to the position, or the appointments may be controlled by political interests. The pressure of public sentiment is growing steadily in favor of appointment on the basis of fitness for the service.

Appointment by the governor, under proper restrictions, has a threefold merit:

(*a*) It recognizes the executive head of the State as responsible to the people for the efficiency of every department of the public service. It tends to make the board responsible to the public.

(*b*) It centers responsibility where it can be definitely located. When the general assembly elects it is difficult to locate responsibility.

(*c*) Requiring that appointments be made from an eligible list, or in some other way throwing proper definite limitations around the appointing power, provides against abuse and protects the board from undue political interference. It is doubtful if it is ever advisable to make the governor a member of the board.

*Size of the board, term of office, and mode of retiring.*—The tendency seems to be toward a board composed of from 6 to 11 members, holding office from 6 to 8 years, and retiring in small groups. The boards vary in number from 3 to 13; 6 States have as few as 3, and 1 has 13. These smallest numbers are all made up of ex officio members and may be regarded as representing the passing type. In 14 of the 37 States the boards range from 8 to 12 members. This group includes a striking number of strong boards, as in Arizona, Louisiana, Maryland, Massachusetts, New York, Tennessee, and Virginia. A board of this size is not too large for working efficiency and is sufficiently large to create continuity of service, provided it is organized to retire in small groups.

In case of all the ex officio boards the term of office is fixed and is usually 2 to 4 years. In such boards members usually retire of necessity in a body. In 16 of the 37 States appointments are from 4 to 6 years, inclusive, with members retiring in small groups; in 2 States the term is for 7 years, in 1 State 8 years, and in 1 State 12 years.

In several States the number of members of the board and the number of years in the term are the same. In West Virginia, Pennsylvania, Arkansas, and New York there are, respectively, 5, 6, 7, and 12 members, 1 retiring each year; in Maryland and Tennessee there are 6 members who retire in groups of 2 every second year.

The board with a reasonably large membership (8 to 11), with appointment for long term of service and so organized that its members will retire in small groups, has two strong points in its favor:

(*a*) It guarantees that degree of continuity in service without which no business can be successfully administered.

(*b*) It can not be changed to satisfy the caprice of any individual or to meet the political needs of any one State administration. The educational service is thus protected against undue political influence without being relieved of responsibility to the public which it serves.

*Duties and powers of the State boards of education.*—The preference seems to be for a State board made responsible for the efficiency of the whole State system of education and clothed with full administrative power. In extent of duties and powers these boards as now constituted vary all the way from near zero to complete control of the State educational interests. The Michigan State board, outside of its duties in control of the State normal schools, has little power except in granting teachers' certificates; the New York State board has supervision of all educational agencies in the State. Between these two extremes the other State boards have all degrees of responsibility and power. In 14 States, for instance, the boards not only have functions concerning the elementary and secondary schools, but are trustees of the State normal schools. These are Connecticut, Idaho, Indiana, Maryland, Massachusetts, Michigan, Montana, Nevada, New Jersey, New York, Oklahoma, Rhode Island, Tennessee, and Vermont. In 4 States the boards are trustees of the State universities. These are Florida, Idaho, Montana. and Oklahoma.[1]

This diversity in the present status of boards is confusing enough, but the tendency in recent legislation is overwhelmingly toward centering in the State board larger responsibility and powers. Idaho, for instance, which until 1912 gave the State board power only to grant and revoke certificates, now gives to it general control of all educational work in the State, even succeeding the powers and duties of the trustees of the State institutions of higher education. The Georgia Legislature has recently enacted a law reorganizing the State board of education and giving to it greatly enlarged powers. The reorganization of the Virginia State board has given it almost full administrative power.

This movement toward centralization has come to its most complete expression in the New York board. Of the powers of this board the Illinois educational commission, in its report issued in 1911, says:

> The board of regents of the University of New York is composed of 12 members, who are elected by the legislature to serve for a period of 12 years. No officers of any of the incorporated educational institutions of the State are eligible to membership. There are no ex officio members, but the commissioner of education acts as its executive officer. The University of the State of New York is a corporation created in 1784. It includes all the incorporated higher educational institutions of the State. The State library and the State museum are departments of the university, and the board may establish other departments if they are deemed necessary to the discharge of its duties. It has power to exclude from membership any institution failing to comply with the law of the State or the rules of the board. It has charge of private academies and in some measure of the public secondary schools, as well as of all the higher institutions. All the powers and duties of the board in relation to the supervision of elementary and secondary schools, including all schools except colleges, technical and professional schools, are devolved upon the commissioner of education, who is elected by the board. The board of New York has power to establish such rules and regulations as are necessary to carry into effect the statutes of the State relating to education. It cooperates with other agencies in bringing within the reach of the

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[1] The principal function of the Montana board is control of the State university, the State agricultural and mechanical college, and the State normal school. See p. 18.

people of the State, young and old, the largest educational opportunities by stimulating interest, recommending methods, designating suitable teachers and lecturers, and by lending books and apparatus. It establishes in the academies of the university examinations in studies, furnishes a suitable standard for graduation from academies and of admission to colleges, and grants certificates and diplomas to those who pass such examinations. It controls the whole matter of granting honorary degrees and diplomas. The board has power to incorporate any university, college, academy, library, museum, or other institution for the promotion of science, literature, art, history, or other departments of knowledge.

Commenting on this tendency to centralize responsibility and power in the State board of education, President Butler, of Columbia University, says:

> There can be no doubt about the general tendency being strongly toward greater centralization. Not only are its advantages quite apparent, but the overwhelming current of legislation and of the decisions of the courts is making it imperative. These are practically in accord, and are to the effect that in each State the school system is not local, but general; not individual schools controlled by separate communities, but a closely related system of schools which has become a State system and is entirely under State authority. Local school officials are now uniformly held to be agents of the State for the administration of a State system of education.[1]

It has been urged that the New York State board is going too far in exercising supervision over private institutions. But it should be definitely understood that in a very important sense there is no such thing as a private educational institution; an educational institution is by the nature of its function essentially public and should be responsive to the needs of the public which it serves. Every educational agency in the State is a part of the State's educational system and should be under the general administrative supervision of the State board of education.

*Summary of tendencies.*—In the gradual development of a more and more effective agency for administering the State's educational affairs the trend is toward a State board of education as the administrative head of the educational system; a board composed of men who have some knowledge of the business which they are to administer; a board appointed by the governor of the State with restrictions to guarantee fitness for the service and to guard against arbitrary use or abuse of the appointing power; a board composed of from 8 to 11 members, appointed for a term of from 6 to 11 years, and retiring in small groups—this to guarantee that degree of continuity in service and freedom from political interference that are necessary for effective service; a board made responsible for all the educational interests of the State and clothed with full power to administer the business.

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[1] Education in the United States, vol. 1, p. 21.

*Composition of State boards of education.*

| States. | Ex officio members. | | | | | | | Appointed or elected members. | | | | Total ex officio members. | Not ex officio members. | Total number on board. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Governor. | Other State political officers. | State superintendent of public instruction. | President State university. | President of agricultural and mechanical college. | President of State normal schools. | Other education officers. | In education work. | Not in education work. | May or may not be in education work. | Appointed or elected by— | | | |
| Arizona | 1 | | 1 | 1 | | 2 | | 3 | | | Governor | 5 | 3 | 8 |
| Arkansas | | | 1 | | | | | | | 7 | do. | 1 | 7 | 8 |
| California | | | | | | | | | 7 | | do. | | 7 | 7 |
| Colorado | | 2 | 1 | | | | | | | | | 3 | | 3 |
| Connecticut | 1 | 1 | | | | | | | | 5 | State legislature | 2 | 5 | 7 |
| Delaware | | | | | | | | | | 7 | Governor | | 7 | 7 |
| Florida | 1 | 3 | 1 | | | | | | | | | 5 | | 5 |
| Georgia | 1 | | 1 | | | | | 3 | 1 | | Governor | 2 | 4 | 6 |
| Idaho | | | 1 | | | | | | 5 | | do. | 1 | 5 | 6 |
| Indiana | | | 1 | 1 | 1 | 1 | 3 | 3 | 3 | | do. | 7 | 6 | 13 |
| Kansas | | | 1 | 1 | 1 | 1 | | 3 | | | do. | 4 | 3 | 7 |
| Kentucky | | 2 | 1 | | | | | | | | | 3 | | 3 |
| Louisiana | 1 | 1 | 1 | | | | | | | 8 | Governor | 3 | 8 | 11 |
| Maryland | 1 | | 1 | | | | | | | 6 | do. | 2 | 6 | 8 |
| Massachusetts | | | | | | | | | | 9 | do. | | 9 | 9 |
| Michigan | | | 1 | | | | | | | 3 | Popular vote | 1 | 3 | 4 |
| Mississippi | | 2 | 1 | | | | | | | | | 3 | | 3 |
| Missouri | 1 | 2 | 1 | | | | | | | | | 4 | | 4 |
| Montana | 1 | 1 | 1 | | | | | | | 8 | Governor | 3 | 8 | 11 |
| Nevada | 1 | | 1 | 1 | | | | | | | | 3 | | 3 |
| New Jersey | | | | | | | | | | 8 | Governor | | 8 | 8 |
| New Mexico | 1 | | 1 | | | | | 3 | | 2 | do. | 2 | 5 | 7 |
| New York | | | | | | | | | 12 | | State legislature | | 12 | 12 |
| North Carolina | 1 | 5 | 1 | | | | | | | | | 7 | | 7 |
| North Dakota | | 2 | 1 | 1 | 1 | | | 3 | 1 | | Governor | 5 | 4 | 9 |
| Oklahoma | | | 1 | | | | | 2 | | 4 | do. | 1 | 6 | 7 |
| Oregon | 1 | 1 | 1 | | | | | | | | | 3 | | 3 |
| Pennsylvania | | | 1 | | | | | 3 | | 3 | Governor | 1 | 6 | 7 |
| Rhode Island | 1 | 1 | | | | | | | | 6 | State legislature | 2 | 6 | 8 |
| South Carolina | 1 | | 1 | | | | | | | 7 | Governor | 2 | 7 | 9 |
| Tennessee | 1 | | 1 | | | | | | | 6 | do. | 2 | 6 | 8 |
| Texas | 1 | 2 | | | | | | | | | | 3 | | 3 |
| Utah | | | 1 | 1 | 1 | | | 2 | | | Governor | 3 | 2 | 5 |
| Vermont | | | | | | | | | 2 | 3 | do. | | 5 | 5 |
| Virginia | 1 | 1 | 1 | | | | | 5 | | | State legislature | 3 | 5 | 8 |
| Washington | | | 1 | 1 | 1 | 1 | | 3 | | | Governor | 4 | 3 | 7 |
| West Virginia | | | 1 | | | | | 5 | | | State superintendent. | 1 | 5 | 6 |

*Digest of laws relating to State school administration boards.*[1]

| States. | Members. | Term of office. | Composition. | Compensation. | Organization. | Powers and duties. |
|---|---|---|---|---|---|---|
| **Arizona**................ (Const., Art. XI, secs. 2 and 3; School laws, 1912, pp. 1, 2, 51, 52, 73, 76, 90, 103-108.) | 8 | ...................... | Governor, superintendent of public instruction, president of the State university, principals of 2 State normal schools, ex officio, and a city superintendent of schools, a principal of a high school, and a county superintendent appointed by the governor. | Serve without pay except for expenses in attending meetings. | Superintendent is secretary; meets not less than once in each quarter; majority of the board must concur before action is valid. | Manages State school fund; adopts regulations, etc., governing State aid to high schools; prescribes course of study for common schools and determines qualifications of graduates from high schools and entrants to normal schools; administers free textbook and teachers' pension laws; issues life certificates to teachers; has charge of the education of the deaf and blind. |
| **Arkansas**............... (Act 431, June 1, 1911.) | 8 | Appointive members, 7 years, 1 appointed each year. | State superintendent, ex officio, and 1 member appointed by the governor from each congressional district. | Serve without pay, except for traveling expenses when attending meetings of the board. | Superintendent is ex officio chairman; one prescribed meeting annually, superintendent may call others; secretary elected by board. | Has general supervision over the public schools of the State; has the management and investment of the State common-school fund; serves as board for chartering educational institutions; has supervision over the issuance of State teachers' certificates; may provide courses of study, distribute plans for schoolhouses, prescribe rules for the sanitary inspection of schoolhouses and medical examination of school children, but may not prescribe textbooks. |
| **California**.............. (Acts of 1913.) | 7 | 4.................. | Appointed by governor, 2 every second year; no salaried educational officer may be appointed. | Expenses in attending meetings and $15 per day for each day board is in session. | Board elects its own president; State superintendent is secretary of board and its executive officer; meets every quarter; vote of majority of all members necessary to validate its acts. | Adopts rules for the government of day and evening elementary schools, the day and evening secondary schools, the technical and vocational schools of the State and all other schools, except the State university, receiving financial aid from the State; appoints 3 assistant State superintendents; makes plans for the improvement of the administration and efficiency of the schools, makes recommendations concerning changes in school legislation that may seem necessary; compiles and adopts uniform textbooks for common schools, which books, under the direction of the board, are printed by the State and sold at cost; prescribes credentials for high-school teachers; grants to teachers life diplomas of 4 grades valid throughout the State; accredits normal schools and universities. |

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[1] Does not include boards having control of school lands, boards of examiners of teachers, textbook commissions, normal school boards, boards in control of State institutions of higher education, or other bodies not having administrative functions in connection with public elementary and secondary schools. This digest and the following relative to the State school officers are based on tables prepared by W. R. Hood, of the Bureau of Education. The section dealing with each State has been sent to each State superintendent and corrections made by them have been included.

*Digest of laws relating to State school administration boards*—Continued.

| States. | Members. | Term of office. | Composition. | Compensation. | Organization. | Powers and duties. |
|---|---|---|---|---|---|---|
| Colorado (Const., Art. IX, secs. 1 and 16; School laws, pp. 31, 302–305.) | 3 | | Superintendent of public instruction, secretary of state, and attorney general. | | Superintendent is chairman; meets in December and at other times when necessary; adopts rules for its own government. | Has general supervision of the public schools; determines appeals from decisions or orders of county superintendent; appoints State board of examiners; grants State diplomas to teachers and may revoke them; may not prescribe textbooks (constitution prohibits). |
| Connecticut (School laws, 1912, pp. 6–11; ch. 166, Acts of 1913.) | 7 | 4 appointed by legislature for 4 years, 1 each year; 1 appointed by governor for 2 years. | Governor and lieutenant governor, ex officio, and 5 appointive members, not more than 2 of whom shall come from the same congressional district; legislature appoints 4 members and the governor 1 member. | Necessary expenses. | Appoints own officers; employs a secretary, who acts as its executive officer, and as State superintendent of public instruction. | Has general supervision and control of the educational interests of the State; may direct what textbooks shall be used; prescribes blanks for registration and reports; conducts teachers' meetings; prepares and distributes outlines of instruction in citizenship; may grant and revoke teachers' certificates; provides for testing the eyesight of children; enforces child-labor law; maintains and controls State normal schools; may appoint school superintendents and supervisors for certain smaller townships. |
| Delaware (Ch. 94, Mar. 14, 1911; chs. 106, 117, and 122, Acts of 1913.) | 7 | 7 years; 1 appointed each year. | 7 members, all appointed by the governor. | Serve without pay except for necessary expenses. | State commissioner of education is secretary; other officers deemed necessary are elected by the board; fixes time of holding its meetings. | Has general supervision of public schools; makes and enforces rules and regulations for the conduct of the schools; prescribes textbooks to be used and contracts as to prices; regulates course of study in the schools; determines conditions under which county superintendents issue teachers' certificates; adopts rules for the sanitary inspection of school buildings; investigates needs of schools and may require reports from teachers and school officers; recommends legislation; cooperates with trustees of Delaware College in fixing courses of study for department of education in said college; cooperates with Delaware College in maintaining summer schools for teachers. |
| Florida (Const., Art. XII, sec. 3; School laws, 1911, pp. 14, 15, 20, 50–81.) | 5 | | Governor, secretary of state, attorney general, State treasurer, and superintendent of public instruction. | | Governor is president, superintendent is secretary. | Has management of school lands and educational funds of the State; decides appeals from county authorities on school affairs; may remove any subordinate officers; fills vacancies for unexpired terms on county school boards; holds property of and, in conjunction with a board of control, manages higher institutions of learning. |

| | | | | | | |
|---|---|---|---|---|---|---|
| Georgia (No. 307, Acts of 1911, p. 94.) | 6 | Appointive members, 4 years, 2 every 2 years. | Governor, State superintendent, and 4 members appointed by the governor, 3 of whom shall be experienced educators. | Appointive members receive each $250 annually and traveling expenses. | Governor is president, superintendent is chief executive officer; meets at least quarterly. | Provides rules and regulations for the supervision of all schools; provides course of study for elementary and high schools; selects textbooks; hears and decides appeals on decision of lower school authorities; provides normal instruction for teachers and may compel attendance at teachers' institutes; grants State and special licenses to teach. |
| Idaho (Const., Art. IX, sec. 2: school laws, 1913, pp. 5–13); board of education and board of regents of the University of Idaho. | 6 | Appointive members, 5 years, 1 appointed each year. | Superintendent of public instruction, ex officio, and 5 members appointed by the governor. | $100 per annum each, and necessary expenses. | Elects such officers as it deems necessary; meets at least semiannually. | Has general control of State institutions and succeeds to powers and duties of trustees of such institutions; appoints a commissioner of education as an advisory officer; assigns functions to its executive officers; has general supervision and control of public schools; is final court of appeal in controversies; has legislative functions not inconsistent with law; recommends to legislature changes in school laws; standardizes instruction in institutions; prescribes course of study for public schools; determines how textbooks shall be adopted; determines whether textbooks shall be free; directs the work of summer normals and teachers' institutes; controls certification of teachers; directs State library commission; standardizes school buildings, equipment, etc.; adopts system of reports; classifies high schools; controls rural high schools. |
| Indiana (School laws, 1911, pp. 34–45, 54–59, 62, 104, 116, 291–295, 334, 336–338; ch. 24, Acts of 1913). | 13 | Appointive members, 4 years. | State superintendent, president of the State university, president of Purdue University, president of State normal school, superintendents of schools in 3 largest cities, ex officio, 3 citizens engaged in educational work, at least 1 of whom shall be a county superintendent, and 3 persons interested in vocational education, 1 of whom shall be an employer and 1 an employee. | Members other than superintendent receive $5 per day and expenses while actually on duty. | Superintendent is president; board elects one of its members secretary and treasurer; meets on the call of the president or a majority of the members. | Determines such administrative questions as are not otherwise provided by law; grants and revokes State certificates; selects or procures the compilation of textbooks for the common schools; constitutes teachers' training board and provides normal instruction; makes rules for the enforcement of the medical inspection law; appoints a board of three visitors to State normal school; appoints trustees of Indiana University; appoints and directs a high-school inspector; prescribes course of study for accredited normal schools; has control of State-aided vocational schools. |

*Digest of laws relating to State school administration boards*—Continued.

| States. | Members. | Term of office. | Composition. | Compensation. | Organization. | Powers and duties. |
|---|---|---|---|---|---|---|
| **Kansas** (School laws, 1913, pp. 23–29, 32, 34, 35, 143, 157, 167–169.) | 7 | Appointive members, 2 years. | State superintendent of public instruction, chancellor of State university, president of the State Agricultural College, president of the State Normal School, ex officio, and 3 others appointed by the governor from those engaged in school work. | Necessary expenses in attending meetings. | | Prescribes course of study for normal institutes and for public schools, but certain subjects prescribed by law must be included; approves courses of study of colleges and universities for purpose of granting State certificates for teaching; issues and may revoke State diplomas and certificates; adopts rules for the examination of kindergarten teachers; prescribes normal training courses in high schools; prepares examination questions for county teachers' certificates; prescribes course of study for rural schools; prepares examination questions for common school diplomas; distributes State funds to approved schools. |
| **Kentucky** (School laws, 1912, pp. 10, 28, 71.) | 3 | | Superintendent of public instruction, secretary of state, and attorney general. | | Superintendent is chairman; 2 members constitute a quorum; meets on call of the chairman. | Manages all real or personal property held by the State for the benefit of the common schools; makes rules and regulations for the government of the common schools and prescribes and publishes a course of study for them; prescribes regulations for the management of county teachers' libraries and prepares lists of books for subdistrict libraries; issues State teachers' certificates. |
| **Louisiana** (School laws, 1912, pp. 15, 16, 27, 30.) | 11 | | Governor, superintendent of public instruction, and attorney general, ex officio, and 1 citizen from each congressional district, appointed by the governor. | Traveling expenses and per diem while board is in session equal to per diem of members of the legislature. | Governor is president, superintendent is secretary; regular meeting before December, other meetings held on call of the governor. | Prepares rules and by-laws for the government of the public schools; gives directions as to branches of study taught; adopts textbooks and enforces uniformity; fixes procedure for awarding contracts, locating depositories, etc., for the distribution of books; may require parish superintendents to make reports; manages summer normal schools and may order holding of other teachers' institutes; has charge of examination of teachers and issues certificates. |
| **Maryland** (School laws, 1912, pp. 6, 9–11, 49–51, 29.) | 8 | Appointive members, 6 years, 2 appointed every 2 years. | Governor, superintendent of public education, ex officio, and 6 persons of "high character, integrity, and capacity" appointed by the governor | Actual expenses incurred in discharge of duties. | Hold regular meetings in May, August, November, and February, and special meetings as occasion may require. | Has general care and supervision of the public-school interests; may institute legal proceedings to carry out purposes of the law; enacts by-laws which, if not in conflict with the law, have the force of law; may remove or suspend county superin- |

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| | | | with the consent of the senate if in session; principals of State normal schools are ex officio honorary members. | | | tendents for cause; decides controversies and disputes arising under the law; secures uniformity in statistical reports of teachers and county superintendents; grants teachers' certificates; members are ex officio trustees of State normal schools; may publish a list of approved colleges and universities; approves State-aided high schools; administers teachers' pension law; prescribes requirements for issuing academic and professional degrees. |
| Massachusetts.........<br>(School laws, 1911.) | 9 | 3 years, 3 appointed each year. | 9 members appointed by the governor with the advice and consent of the council. | Necessary expenses. | State commissioner of education is executive officer of board. | Appoints State commissioner of education fixes his salary, and may remove him from office; appoints 2 deputy commissioners, field agents of the board, and office help; suggests means of improving the school system; prescribes rules for school census and forms for statistical reports; may receive and hold in trust gifts or devises for educational purposes; has general management of State normal schools; arranges for practice schools in places where normal schools are located; has supervision of the establishment and maintenance of vocational schools; maintains State teachers' employment bureau; fixes time and place of holding State teachers' institutes and may expend $350 for each institute; issues certificates to teachers in State-aided high schools; approves appointment of superintendents in superintendency unions receiving State aid; supervises education of deaf and blind; visits county truant schools; inspects high schools for purpose of approving for State reimbursement of tuition fees of pupils of other towns not having high schools; prescribes rules for testing sight and hearing of pupils in all schools; withholds State school fund from towns not complying with law. |
| Michigan..............<br>(Const., Art. XIII, sec. 9; School laws, 1911, pp. 8, 77, 78, 141-150; No. 258, Acts of 1913.) | 4 | Elective members, 6 years. | Superintendent of public instruction, ex officio, and 3 members elected by vote of the people. | 3 per diem each and actual expenses. | Superintendent is secretary and executive officer; majority constitutes a quorum; holds at least 2 meetings each year. | As body corporate, holds property of State normal schools and has general supervision of them; prescribes courses of study in such schools and grants diplomas to graduates; grants teachers' certificates to graduates of State normal schools and approved colleges and may indorse certificates from other States; provides education for blind children; approves textbooks on physiology and hygiene for all public schools. |

*Digest of laws relating to State school administration boards*—Continued.

| States. | Members. | Term of office. | Composition. | Compensation. | Organization. | Powers and duties. |
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| Mississippi............ (Const., Art. VIII, sec. 203; School laws, 1912, pp. 3, 4, 25, 46.) | 3 | .................... | Secretary of state, attorney general, and superintendent, ex officio. | .................... | Meets at State capitol on call of any member; superintendent presides. | Has management of the school funds; audits claims against them; fixes expenses of superintendent's office; has practical administration of school system; may adopt course of study; prescribes rules for county teachers' examinations; prepares outlines for teachers' institutes; decides appeals from county superintendents or State superintendent; may remove county superintendents for cause; has powers of a court to compel attendance of witnesses, take depositions, etc. |
| Missouri............... (Const., Art. XI, sec. 4; School laws, 1911, pp. 10, 103, 110-112.) | 4 | .................... | Governor, secretary of state, attorney general, and superintendent, ex officio. | .................... | Superintendent is president. | Has general supervision over entire educational interests of the State; directs investment of all moneys received by the State for educational purposes; sees that all moneys are applied as intended by grant, devise, or law; sees that proper disposition is made of school lands; sees that county school funds are expended according to law; prepares outlines of work for colored teachers' institutes; prescribes conditions for approved summer schools. |
| Montana............... (Const., Art. XI, sec. 11; School laws, 1911, pp. 14-27; ch. 76, Mar. 12, 1913.) | 11 | Appointive members, 4 years, 2 appointed each year. | Governor, State superintendent, and attorney general, ex officio, and 8 members appointed by the governor with the consent of the senate. | Actual expenses in performance of duties. | Governor is president; superintendent is secretary; majority is a quorum; meets by law semiannually, and on call of president and secretary special meetings may be held at any time and place. | Has general supervision over the State university and various other State educational institutions, electing presidents and faculties, granting diplomas to graduates, and controlling the property and finances. Immediate control in other things vests with the executive boards, composed for each institution of the president and 2 members appointed by the governor, with the advice and consent of the State board of education; the State board recommends to the legislature text books for public schools; prescribes standards of promotion to high schools; grants State and life certificates to teachers; and appoints instructors in county institutes. |

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| Nevada................ (School laws, 1911, pp. 9, 10.) | 3 | ...................... | Governor, superintendent of public instruction, and president of State university, ex officio. | ...................... | Governor is president; superintendent is secretary; meets at call of secretary, but must hold at least 2 meetings a year. | Prescribes courses of study for the public schools and, with 4 members appointed by governor, serves as textbook commission; constitutes normal training school board; grants teachers' certificates and diplomas; adopts lists of books for district libraries, except for districts of the first class; designates some monthly journal as the official journal of the board. |
| New Jersey............ (School laws, 1911, pp. 7-10; ch. 315, Apr. 1, 1912.) | 8 | 8 years; 1 appointed each year. | 8 male citizens appointed by the governor; must have been residents of the State 5 years or more immediately preceding appointment; not more than 4 from same political party and not more than 1 from same county. | Necessary expenses. | Elects its president and officers; meets monthly and at such other times and places within the State as necessary. | Controls State normal schools, school for the deaf, and industrial school for colored youth; has general supervision and control of public instruction; appoints an inspector of buildings and approves contracts, plans, and specifications for school buildings; appoints an inspector of accounts of school districts; prescribes a uniform and simple system of bookkeeping for use in school districts; prescribes rules for the examination and certification of teachers and rules for holding teachers' institutes; decides appeals from commissioner of education; may withdraw or withhold its approval of secondary schools; fixes nonresident tuition rates when districts affected can not agree; may compel the attendance of witnesses and the production of books, records, etc.; approves institutions in the State before they may confer degrees. |
| New Mexico........... (Const., Art. XII, sec. 6; school law, 1909, pp. 200-206, 208; chs. 37, 41, 52, law of 1912.) | 7 | 4 years............ | Governor and State superintendent, ex officio, and 5 members appointed by the governor with the consent of the senate, 1 of whom shall be a head of a State educational institution, 1 a county superintendent of schools, and 1 a person connected with educational work. | $2.50 per diem and 10 cents per mile traveled one way in attending meetings. | Governor is president; superintendent is secretary; 4 meetings annually. | Has general control of the public schools; prescribes course of study; adopts uniform textbooks; grants, renews, and revokes teachers' certificates; has general supervision of teachers' institutes and issues course of study for them; issues course of study for industrial education; empowered to adopt a standard of efficiency for commercial courses and to issue certificates of recognition to schools meeting the standard; to issue permits to commercial schools and correspondence schools to canvas for students. |

*Digest of laws relating to State school administration boards*—Continued.

| States. | Members. | Term of office. | Composition. | Compensation. | Organization. | Powers and duties. |
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| New York.............<br>Regents of the University of the State of New York.[1] | 12 | 12 years; 1 elected each year. | The number shall be 3 more than the number of existing judicial districts; each judicial district shall always have 1 regent; no regent shall be a trustee, president, principal, or any other officer of an institution of the university. | Necessary expenses. | Chancellor and a vice chancellor elected by the regents; regents provide for regular meetings and called meetings may be held; commissioner of education is executive officer; 7 constitute a quorum. | The regents exercise the general management and supervision of all public schools and all the educational work of the State.<br>*Degrees.*—They confer certificates, diplomas, and degrees on persons who satisfactorily meet the requirements prescribed.<br>*Examinations.*—In the secondary institutions regents' examinations furnish the standard of graduation and of admission to colleges. Certificates or diplomas are conferred on students that satisfactorily pass the academic examinations. The regents also supervise the entrance requirements to the professional schools and conduct the professional licensing examinations.<br>*Registration.*—The regents register both domestic and foreign institutions in terms of New York standards, fix the value of degrees, diplomas, and certificates issued by institutions of other States and countries and presented for entrance to schools, colleges, and the professions in New York State.<br>*Incorporation.*—Under such name and with such number of trustees or other managers, and with such powers, privileges, and duties, and subject to such limitations and restrictions in all respect as the regents may prescribe in conformity to law, the regents by an instrument under their seal and recorded in their office incorporate institutions or associations for the promotion of science, literature, art, history, or other departments of knowledge or of education in any way, associations of teachers, students, graduates of educational institutions, and other associations whose approved purposes are in whole or in part of educational or cultural value deemed worthy of recognition and encouragement by the university. No institution or association which might be incorporated by the regents may be incorporated under any other general law without their consent.<br>*Extension.*—The regents extend to the people at large increased educational opportuni- |

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| | | | | | ties, facilities, stimulate interest therein, recommend methods, designate suitable teachers and lecturers, conduct examinations and grant credentials, and otherwise organize, aid, and conduct such work.<br>*Visitation.*—The regents or their representatives visit, examine into, and inspect the institutions in the university, and require annual reports duly verified from the various institutions of the university. For refusal or continued neglect to make any report required or for violation of any law or any rule of the university, the regents may suspend the charter or any of the rights and privileges of such institution.<br>*Departments.*—The regents establish such departments and divisions as they deem useful in the discharge of their duties. The educational and administrative work is performed by 5 departments of the university—higher education, secondary education, elementary education, State library, and science. The work of these departments is distributed among 13 divisions—viz, administration, attendance, educational extension, examinations, history, inspections, law, library school, public records, school libraries, statistics, visual instruction, and vocational schools.<br>*Education building.*—It is occupied exclusively by the university, including the various departments and divisions of the work together with such other work as the regents may in their discretion provide for therein. The building and the offices of the departments are maintained at State expense. |
| North Carolina........ (Cons. Art. IX, sec. 8; School laws, 1913, pp. 37–42, 84–94.) | 7 | .................... | Governor, lieutenant governor, secretary of state, treasurer, auditor, superintendent of public instruction, and attorney general. | Contingent expenses provided by legislature. | Governor is president; superintendent is secretary; majority is a quorum; meets at such times as a majority elect, but governor may call a meeting at any time. | Controls State permanent school fund ("literary fund"); apportions State school funds; loans money from literary fund to county boards to build or improve schoolhouses; adopts uniform system of text books in conjunction with subtextbook commissioners; controls colored normal schools; elects directors of the State normal and industrial college and trustees of the East Carolina Training School; may add subjects to course of study prescribed by law for the public schools; approves establishment of public high schools by county boards. |

[1] The University of the State of New York is the State department of education charged with, and under its caption and its name as such, exercises the general management and supervision of all public schools and all the educational work of the State.

*Digest of laws relating to State school administration boards*—Continued.

| States. | Members. | Term of office. | Composition. | Compensation. | Organization. | Powers and duties. |
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| North Dakota (Ch. 149, Mar. 11, 1913.) | 9 | Appointive members, 2 years. | President of university, president of the agricultural college, State superintendent of public instruction, State inspector of graded and rural schools, State high-school inspector, ex officio, and a normal school president, an industrial school president, a county superintendent of schools, and a male citizen not connected with the educational system appointed by the governor. | Members not receiving salaries from State, county, or State institutions shall receive $3 for each day employed; all receive actual expenses when discharging duties. | Superintendent is president, his deputy is secretary; 6 regular meetings each year and special meetings not to exceed 6 may be held at discretion of board. | Establishes rules to secure uniformity, efficiency, etc., among schools receiving State aid, as rural, graded or consolidated schools; prescribes examinations for teachers and issues certificates; has supervision of county agricultural and training schools, prescribes courses of study for such schools, determines qualifications of their teachers, etc.; has duties of former high-school board, appoints an inspector of high schools on the nomination of the State superintendent, apportions State aid to high schools and to rural, graded, and consolidated schools, may visit and inspect any educational institution under the supervision of the State, and may require reports from such institutions. |
| Oklahoma (Cons., Art. XIII, sec. 5; ch. 47, Mar. 6, 1911.) | 7 | Appointive members, 6 years, 2 appointed every 2 years; may not be removed during term except for cause. | Superintendent of public instruction, and 6 members appointed by the governor, at least 2 of whom shall have had at least 4 years' experience in actual school work, 2 of which must have been in Oklahoma. | $6 a day, traveling expenses and hotel expenses not to exceed $3 a day for appointive members. | Superintendent is president; secretary appointed by president to receive $2,000 per annum. | Controls State educational institutions except State agricultural and mechanical college and district agricultural schools; has general supervision of the public schools; adopts courses of study for common schools and county normal institutes; adopts uniform textbooks, arranges courses of study and adopts textbooks for higher institutions; makes rules regarding the issuance of certificates; prepares examinations for applicants for county and city certificates; examines applicants for State certificates; prepares examinations for graduates of the eighth grade; classifies high schools and accredits them to higher institutions; outlines courses for reading circles; formulates rules regarding the organization, etc., of commercial and business colleges. |
| Oregon (School laws, 1911, pp. 10, 24, 25, 117.) | 3 | .................. | Governor, secretary of state, and superintendent of public instruction. | .................. | Superintendent is secretary; meets in January and July. | Prescribes rules for the general government of the public schools; authorizes textbooks adopted by textbook commission; prepares a course of study for grammar-grade schools; prescribes rules fixing standards for high schools receiving money from county high-school fund; indicates at least 60 per cent of the questions in theory and practice used in county examinations; decides appeals made to |

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| | | | | | | State superintendent and submitted by him. |
| **Pennsylvania** (School laws, 1911, pp. 49-51, 101, 102, 123, 124.) | 7 | Appointive members, 6 years, 1 appointed each year. | Superintendent of public instruction, ex officio, and 6 members appointed by the governor with the consent of two-thirds of the senate; 3 of appointive members shall be successful educators of the State. | Necessary expenses incurred in the performance of their duties. | Superintendent is president; makes its own by-laws and has such officers as it deems necessary. | Controls all real and personal property belonging to the State school fund; reports and recommends to the governor and legislature necessary legislation to make schools efficient; equalizes, through special appropriations or otherwise, the educational advantages of the different parts of the State; inspects and requires reports from schools or institutions wholly or partly supported by the State; encourages and promotes instruction in agriculture, manual training, and household arts; prescribes rules for the sanitary equipment and inspection of school buildings; appoints the boards of trustees for State normal schools. |
| **Rhode Island** (School laws, 1910, pp. 8-11. 25-27, 38, 46, 67, 75; ch. 678, Apr. 25, 1911; ch. 828, Apr 29, 1912, and ch. 839, May 3, 1912.) | 8 | Elective members, 6 years, 2 elected each 2 years. | Governor and lieutenant governor ex officio, and 6 members elected by the legislature for 6 years, 1 member from each county in the State, except Providence County, which has 2 members. | Necessary expenses incurred in the discharge of duties. | Governor is president, commissioner of education is secretary; holds quarterly meetings and may hold special meetings on call of president. | Has general supervision and control of public schools, high schools, manual schools, and normal institutes; appoints State commissioner of public schools; prepares and furnishes blanks on which reports from all State-aided schools or institutions are required; furnishes registers for private schools and receives reports from them; provides scholarships at Brown University for post graduate work in preparation for teaching; provides for examinations and certification of teachers; administers teachers' pension law; supervises education of deaf and blind; controls school for the feeble-minded; apportions money for public libraries, prescribes books for same, and provides for visitation and examination; maintains a system of traveling libraries. |
| **South Carolina** (School laws, 1912, pp. 9-13, 16, 31, 32, 38.) | 9 | 4 years. | Governor and superintendent of education, ex officio, and 7 members appointed by the governor. | $4 per diem and mileage as provided for members of legislature; may not be paid for more than 20 days. | Governor is president; superintendent is secretary; meets on call of president or a majority of the members; majority is a quorum. | Is advisory board to superintendent; adopts rules for the government of public schools; prescribes uniform textbooks; determines appeals; prescribes rules for the examination of teachers; prescribes standards of efficiency for teachers' examinations before county boards; grants and may revoke State teachers' certificates; awards scholarships in the institutions supported in whole or in part by the State; appoints two of the three members of county board of education; prescribes courses of study for high schools; constitutes State high-school board; adopts rules governing school libraries and administers State aid. |

*Digest of laws relating to State school administration boards*—Continued.

| States. | Members. | Term of office. | Composition. | Compensation. | Organization. | Powers and duties. |
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| Tennessee. ‘School laws, 1911, pp. 7-10, 76-87; ch. 40, acts of 1913.’ | 8 | Appointive members, 6 years, 2 appointed every 2 years. | Governor, superintendent of public instruction, ex officio, and 6 members appointed by the governor. | Necessary expenses. | Governor is president, superintendent is secretary and treasurer. | Has control and management of the State normal schools, fixing course of study, employing teachers and other officers, prescribing entrance requirements and standards for graduation. It prescribes rules for the examination of candidates for county superintendent; classifies high schools and prescribes rules for granting State aid to such schools; regulates the examination and certification of teachers in high schools receiving State aid; adopts rules governing school libraries receiving State aid. |
| Texas. (School laws, 1911, pp. 7-11.) | 3 | .................... | Governor, secretary of state, and comptroller. | .................... | Governor is president, superintendent is secretary. | Apportions school funds to counties, cities, towns, and districts; has charge of investment of permanent school fund; may create school districts at eleemosynary institutions; determines appeals from the State superintendent; grants State aid to high schools. |
| Utah. (School laws, 1911, pp. 3-7, 38, 40, 42; ch. 13, Feb. 24, 1913; ch. 91, Mar. 20, 1913.) | 5 | 4 years | Superintendent of public instruction, president of the State University, president of the agricultural college, ex officio, and 2 other persons of large experience and eminent professional standing to be appointed by the governor with the consent of the senate. | Members not receiving salaries from the State receive $4 per diem, and all members receive actual necessary expenses. | Superintendent is chairman, chairman appoints a secretary from among the members; meets on call of chairman at least twice a year; majority is quorum. | Has general control and supervision of public-school system; appoints 5 of 7 members to prescribe course of study for common schools; prescribes course of study for high schools; fixes standards for high schools; may authorize the organization of teachers' retirement associations; grants State diplomas and certificates to teachers; may approve diplomas and certificates from other States; promotes establishment and maintenance of libraries. |
| Vermont. (Act 62, Feb. 13, 1913.) | 5 | 6 years, 2 appointed biennially, except when there is only 1 vacancy. | Members appointed by the governor with the consent of the senate; not more than 3 members shall be engaged professionally in educational pursuits. | $4 per diem each and actual expenses incurred in the performance of duties. | Board elects its own chairman, vice chairman, and a treasurer; holds at least 4 regular meetings annually and may hold special meetings; State superintendent is executive officer. | Appoints State superintendent, fixes his salary, and determines expenditures of his office; inspects and reports to legislature upon the expenditure of State funds appropriated for schools and colleges; has expenditure of $7,000 annually for summer schools, educational meetings, agricultural instruction, inspection of high schools, and for necessary expenses of board; orders on application the formation of unions for school supervision; prescribes rules governing the examination and qualifications of union superintendents; |

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| | | | | | | has control of State normal schools, including the employment of instructors, expenditure of moneys, fixing courses of study, granting diplomas, etc.; may arrange with local school boards for the establishment of practice schools; fixes standards of high schools and academies. |
| **Virginia**................ (School laws, 1910.) | 8 | **Those elected by the senate, 4 years; the 2 appointed by the board serve 2 years.** | Governor, attorney general, superintendent of public instruction, and 3 experienced educators elected by the senate from a list of eligibles from the faculties of State institutions. The board thus constituted shall associate with itself 2 division superintendents of schools, 1 from a county and 1 from a city; the 2 associate members shall not participate in the appointment of any public-school **officials, otherwise their powers are equal with those of other members.** | **Reasonable expenses to appointive members.** | **Superintendent is president; majority constitutes a quorum; meets on call of the president or a majority of the members.** | Has general administration of public-school system; controls school fund ("literary fund"); divides the State into appropriate school "divisions"; appoints "division" superintendents of schools and fixes the portion of their salaries paid by the State; prescribes the duties of the State superintendent; approves appointment of employees of superintendent's office and determines contingent expenses of such office; makes rules for government of schools; provides for examination of teachers by State board of examiners and for the inspection of schools by inspectors; selects textbooks and other educational appliances; supervises organization of summer normal schools; decides appeals from State superintendent; may amend superintendent's plan of apportionment of State school moneys; may fine, suspend, or remove division superintendents; appoints board of directors of State library; administers teachers' pension law; standardizes high schools and provides for their inspection; controls schools in State reformatories; approves lists of books for traveling libraries; registers higher institutions of learning. |
| **Washington**............ (School laws, 1909 pp. 12-14, 108, 109 ch. 16, Feb. 18, 1911.) | 7 | **Appointed and elected members hold office for 2 years.** | Superintendent of public instruction, president of the university, president of the State college, principal of one of the normal schools elected by the principals of State normal schools, and 3 holders of State life diplomas appointed by the governor, 1 a superintendent of a first-class district, 1 a county superintendent, and 1 a principal of a 4-year high school. | **Actual necessary expenses; members not already on salary may receive $5 per day when on special committee work.** | Superintendent is president, deputy superintendent is secretary; one meeting annually and necessary special meetings on call of superintendent. | Prescribes rules for the general government of the common schools; prepares outline courses of study for primary, grammar, and high schools; prepares questions for examinations for graduation from grammar schools; examines and accredits secondary schools; outlines high-school extension courses and prescribes examinations; prepares questions to be used by county superintendents in examining teachers; approves entrance requirements at State university, State college, and State normal schools; approves courses of study in normal training in higher institutions. |

*Digest of laws relating to State school administration boards*—Continued.

| States. | Members. | Term of office. | Composition. | Compensation. | Organization. | Powers and duties. |
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| West Virginia.......... (School laws, 1911, pp. 58-60.) | 6 | Appointive members, 5 years, 1 appointed each year. | Superintendent of free schools and 5 other persons engaged in educational work, appointed by the superintendent, 1 from each congressional district and not more than 3 from the same political party. | Appointive members receive $5 per day each and necessary expenses while in the discharge of their duties, but no member shall be paid for more than 20 days in one year. | Meets on call of chairman and at such other times as 4 members may determine. | Prescribes courses of study for public schools and defines the relations that the different grades of schools bear each other; prescribes and publishes the branches in which applicants for primary teachers' and high-school teachers' certificates shall be examined; holds examinations and grants State professional certificates to teachers; may recognize certificates issued in other States when of equal value; inspects private schools which maintain normal courses whose graduates apply for State certificates. |

## STATE SUPERINTENDENT OF PUBLIC INSTRUCTION.

Present practice might seem to indicate that public sentiment is in favor of electing the State superintendent by popular vote, as is done in 33 States. Sentiment, however, seems to be turning from the election of the State superintendent in favor of the appointment of the State superintendent by the State board of education or by the governor. The Vermont State superintendent is now selected by the State board of education instead of appointed by the governor, as formerly; the Ohio and Iowa State superintendents are now appointed by the governor instead of being elected by popular vote; Delaware, where, until two years ago, an elected State officer acted ex officio as State superintendent, has now a State commissioner of education appointed by the governor. At a meeting of the State superintendents of public instruction of the various States, held at St. Paul, Minn., in July, 1914, in connection with the annual meeting of the National Education Association, resolutions were adopted by almost a unanimous vote favoring the appointment of the State superintendent by the State board of education. Movements are on foot at the present time in several States to remove the State superintendency from an elected office. In some of them desiring to make the change the State superintendent of public instruction is a constitutional officer, and no change in the method of selection may be made without amending the State constitution.

The following shows the method of selection of State superintendent in the various States:

In 33 States he is elected by the people, viz, in Alabama, Arizona, Arkansas, California, Colorado, Florida, Georgia, Idaho, Illinois, Indiana, Kansas, Kentucky, Louisiana, Michigan, Mississippi, Missouri, Montana, Nebraska, Nevada, New Mexico, North Carolina, North Dakota, Oklahoma, Oregon, South Carolina, South Dakota, Texas, Utah, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

In 10 States he is appointed by the governor, viz, in Delaware, Iowa, Maine, Maryland, Minnesota, New Hampshire, New Jersey, Ohio, Pennsylvania, and Tennessee.

In five States he is appointed by the State board of education, viz, in Connecticut, Massachusetts, New York, Rhode Island, and Vermont.

In nearly all of the States the office of State superintendent of public instruction was created as a political office; in the majority it has remained a political office; it is difficult to change it. There is a diversity of opinion among educational leaders as to how, in the interest of greater efficiency, he ought to be appointed, but the majority seem to favor his selection by a nonpartisan State board of education. Some of the serious disadvantages of his election by popular vote are reasonably clear:

(*a*) This method of appointment limits the field from which it selects the man for the position; he must be a citizen of the given State. In States where the superintendent is appointed by the State board of education, and in some States where he is appointed by the governor, he may be selected from the country at large. The city board of education selects its superintendent of schools from the country at large. Trustees of colleges and universities, even of State universities, select executive heads of these institutions from the country at large. Boards of directors in control of large business interests select their executive officers from the country at large. In Germany many towns and cities, when there is a vacancy in the office of mayor, advertise the fact throughout the Empire and invite applications for the position; and a similar method of selecting the city manager is being adopted in cities in the United States with the commission form of government. Such freedom of selection is clearly in the interest of better service.

(*b*) Where the State superintendent is elected by popular vote the salary is fixed beforehand by law; the salary can not be adjusted to fit the man desired, but a man must be found to fit the salary. It is clearly in the interest of better service that city school boards, trustees of colleges and universities, and boards of business directors have authority to adjust the salary of executive officers to the needs and effectiveness of the service.

(*c*) Where the State superintendent is selected by popular vote the term of office is short, two to four years, and reappointment is uncertain. The superintendent can not count on winning reappointment by rendering good service. Lack of continuity in the service, lack of basis for making and working out far-reaching plans, is a serious handicap to the superintendent, however capable.

(*d*) This method of appointment makes the office a political one and subjects it to all the fluctuations of party and factional politics. Under these conditions the position is not attractive; no one can look to it as a career.

These serious objections to the selection of the State superintendent by popular vote hold true in part at least when the appointment is left to the governor. In a few States the governor is authorized to select the State superintendent from within or without the State. In five States, as previously mentioned, the State superintendent is appointed by the State board and is the executive officer of the board, performing such duties as directed by it. If the State board is to be made responsible for the State's educational business, it would seem that it ought to have the selection of its own executive officer; it should be free to select him from the country at large; it should have power to determine his compensation, and should keep him at his post as long as he is effective.

*Relation of the State superintendent to the State board.*—The trend both in practice and opinion is strongly in favor of the State superintendent as chief executive officer of the board. In those States which have no State board of education the superintendent is sole executive, and in many of the States which have State boards the position of State superintendent was created first, and the board has been made advisory; in many States where the relation of superintendent to the board has not been clearly defined by law, practice has made the State superintendent chief executive. In West Virginia the superintendent appoints the board; in New York he is appointed by the board, he is its chief executive officer, and in addition has many powers and duties not altogether subject to the approval of the board. This is indicated by the powers and duties conferred upon him by State law contained in the following pages.

*Summary.*—The trend in our present development is toward a strong working State board organized on a nonpartisan basis; the best interests of the service would seem to require that this board when thus constituted be given the power to appoint the State superintendent; that it be free to select him from the country at large, that it have authority to pay whatever salary is necessary to get the best man for the position; that it make the man appointed a member of the board and its chief executive officer; that it keep him in the service as long as he proves to be effective, and supply him a staff of assistants needed to do the work.[1] With the State department of education organized on this basis, the position of State superintendent stands first in responsibility and in the opportunity to render effective service.

*Digest of laws relating to chief State school officer.*

| State; title of officer. | Term of office, in years. | Manner of selection. | Salary. | Powers and duties. |
|---|---|---|---|---|
| Alabama............. Superintendent of education. | [2] 4 | By vote of the people. | $3,000 | Has general supervision over the educational interests of the State; apportions school funds to counties; requires reports from school officers; prepares necessary report blanks and furnishes to school officers; keeps accounts with townships and school districts; shall visit annually, if practicable, every county in the State; has general supervision of teachers' institutes; has school laws published; reports to governor; is ex officio a member of boards of trustees of State educational institutions; is member of normal school board, State textbook commission, and commission to locate county high schools. |

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[1] The staffs of the various departments of education are given in the following pages.

[2] Not eligible to succeed himself.

*Digest of laws relating to chief State school officer*—Continued.

| State; title of officer. | Term of office, in years. | Manner of selection. | Salary. | Powers and duties. |
|---|---|---|---|---|
| **Arizona**..............<br>Superintendent of public instruction. | 2 | By vote of the people. | $3,000 | Is a member and secretary of State board of education; is chairman of State board of examiners; superintends the public schools; under supervision of State board apportions school funds to counties; prepares and distributes course of study prescribed by State board; publishes and distributes pamphlets regarding the observance of special days; prepares and furnishes report blanks; makes a report to governor; has school laws printed and supplies them to school officers and libraries; holds annual meetings of county superintendents. |
| **Arkansas**.............<br>Superintendent of public instruction. | 2 | .....do......... | 3,000 | Is member and chairman of State board of education; is general executive officer of the State board; has general supervision of the public schools; apportions school funds; furnishes questions to county examiners of teachers; issues State teaching certificates under supervision of State board; makes annual report to governor; publishes school laws; prescribes uniform system of keeping school accounts. |
| **California**............<br>Superintendent of public instruction. | 4 | .....do......... | 5,000 | Is secretary and executive officer of State board of education; is member and secretary of joint normal school board; has general supervision of the schools of the State; apportions State school funds; prepares and furnishes blanks and forms for making uniform reports; visits normal schools, the several orphan asylums to which State appropriations are made, and public schools, and inquires into their condition; may hold annual convention of county and city superintendents; reports to governor; has school laws printed and furnishes copies to officers and libraries. |
| **Colorado**.............<br>Superintendent of public instruction. | 2 | .....do......... | 3,000 | Is member and president of State board of education; has general supervision of public schools; apportions school funds to counties; has supervision of county superintendents; has school laws printed in pamphlet form; decides all points regarding the construction of the school laws; prepares questions for use of county superintendents in examining teachers; furnishes blanks and registers to school officers for making reports; reports to governor with suggestions; visits schools in counties if practicable; prepares and furnishes test cards for the physical examination of pupils; apportions normal institute fund; is member and president of State board of examiners; is member of board of trustees of State normal school. |
| **Connecticut**..........<br>Secretary of State board of education. | ...... | Appointed by State board of education. | 3,500 | Is executive officer of the State board of education and performs such duties as State board directs; determines whether districts are conducting school according to law; reports to the State comptroller the list of towns and districts forfeiting State aid for failure to comply with the law and the amount of forfeitures; furnishes blanks and registers for returns from private schools; draws order for school-library money. |
| **Delaware**............<br>Commissioner of education. | 2 | Appointed by governor. | 2,000 | Is secretary and executive officer of the State board of education; performs such duties as the board may direct; keeps record of official acts of State board and conducts its correspondence. |
| **Florida**..............<br>Superintendent of public instruction. | 4 | By vote of the people. | 3,600 | Is member and secretary of State board of education; has oversight of all matters pertaining to public schools and to school buildings and grounds; apportions State school funds to counties; has printed and distributes school laws to schools officer and teachers; decides appeals or refers them to board of education; holds meetings of county superintendents; holds teachers' institutes and employs instructors for them; prepares questions for county examinations; holds examinations for and issues State certificates; may grant life certificates; preserves certified copies of lists of persons paying poll taxes. |

*Digest of laws relating to chief State school officer*—Continued.

| State; title of officer. | Term of office, in years. | Manner of selection. | Salary. | Powers and duties. |
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| **Georgia**<br>State superintendent of schools. | 2 | By vote of the people. | $3,000 | Is member and chief executive officer of State board of education; apportions public school funds; appoints with consent of board three State supervisors; appoints an expert accountant to audit books of school officers; institutes suits to recover misapplied funds; prepares blanks for reports from subordinate school officers; may suspend a county superintendent for cause; visits all counties as far as practicable; makes annual report. |
| **Idaho**[1]<br>Superintendent of public instruction. | 2 | .....do........ | 2,400 | Is member and executive officer of State board of education; superintends generally the public schools; apportions State school funds; holds conventions of county and city superintendents and district principals; prepares and furnishes necessary blanks to officers and teachers; has school laws printed and furnishes them to school officers and libraries; makes biennial report to governor; visits all counties if practicable; is member of summer normal school commission and visits such schools annually; prepares questions for examination of teachers. |
| **Illinois**<br>Superintendent of public instruction. | 4 | By vote of the people. | 7,500 | Has general supervision of public schools; advises county superintendents as to conduct of the schools, construction of schoolhouses, etc.; designates statistics to be reported to county superintendents and may require reports from such superintendents; is legal adviser of school officers; hears and determines controversies; grants State certificates; may remit forfeited school funds to districts; requires auditor to withhold funds from counties until necessary reports are made; requires county superintendents to withhold funds from delinquent districts; is member of trustees of all State normal schools and of State university; visits charitable institutions of an educational nature; requests reports from private educational institutions. |
| **Indiana**<br>Superintendent of public instruction. | 2 | .....do........ | 5,000 | Is member and president of State board of education; has general supervision of the public schools; visits each county at least once during his term to examine auditor's books; has supervision of the school funds with special reference to their safe investment; may require reports from school officers and for such purpose furnishes blanks; prescribes forms of bookkeeping; has school laws printed; interprets school laws to school officers; indorses approved certificates issued in other States; appoints a deputy superintendent in charge of industrial education. |
| **Iowa**<br>Superintendent of public instruction. | 4 | Appointed by the governor. | 4,000 | Has general supervision and control over all public schools; ascertains needs of schools and suggests needed changes; classifies the various schools and formulates courses of study; promotes vocational education; prescribes reports to be made by officers and teachers and prepares forms therefor; reports annually school census to State auditor; prepares plans and specifications for schoolhouses; provides for county teachers' institutes; prepares questions for applicants to teach and for eighth-grade examinations; has school laws published; hears and determines appeals; designates training schools for rural teachers. |
| **Kansas**<br>Superintendent of public instruction. | 2 | By vote of the people. | 2,500 | Is member of State board of education; has general supervision of the public schools; distributes State school funds to counties; publishes school laws and distributes to persons entitled to receive them; decides controversies submitted through county superintendents; prescribes and furnishes blank forms; visits each county of the State at least once in 2 years; is member of textbook commission which is authorized to prepare and publish textbooks to be sold to schools at cost; files and preserves reports made to him; reports biennially to governor. |

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[1] Idaho has also a "State commissioner of education" appointed by the State board of education, at a salary of $6,000 per year, who acts as an adviser to the board on educational policies.

*Digest of laws relating to chief State school officer*—Continued.

| State; title of officer. | Term of office, in years. | Manner of selection. | Salary. | Powers and duties. |
|---|---|---|---|---|
| Kentucky<br>Superintendent of public instruction. | 4 | By vote of the people. | $4,000 | Is member and chairman of State board of education; is member of State board of examiners; apportions State school funds; inspects fiscal affairs and conduct of the offices of all school officials who handle public-school money and sees that all laws and regulations are enforced; visits and inspects all schools if practicable; prepares blanks, etc., for reports and furnishes them to school officers; collects and publishes general information in his biennial report regarding institutions for deaf, dumb, blind, and feeble-minded; edits school laws biennially and publishes them with instructions, etc.; on request hears and determines appeals. |
| Louisiana<br>Superintendent of public education. | 4 | .....do | 5,000 | Is member and secretary of State board of education; is ex officio a member of each of the boards of trustees of educational institutions controlled by the State; has general supervision of parish (county) school boards and of all elementary, high, and normal schools; visits parishes as often as practicable; makes biennial report with recommendations; reports subordinate officers to State board of education for neglect of duty, misuse of school funds, etc. |
| Maine<br>Superintendent of public schools. | 3 | Appointed by the governor. | 4,000 | Has general supervision over public schools and advises and directs town committees and superintendents; ascertains number of children 5 to 21 years old to be used as basis of distribution of school funds; prescribes studies to be taught in the common schools, but town committees may prescribe additional studies; prepares and furnishes blanks, etc., for making reports to his office and designates facts to be reported; holds annual conferences for the instruction of superintendents; has school laws printed and distributed to school officers; prescribes examinations for teachers and issues State certificates; keeps list of approved candidates in his office; makes rules governing administration of teachers' pension laws; holds summer training schools for teachers; classifies high schools and causes State-aided schools to be inspected; is member of board of trustees of normal schools. |
| Maryland<br>Superintendent of public education. | 4 | .....do | 3,000 | Is member and secretary of State board of education; performs such duties as directed by board; receives reports from county boards and examines their accounts; inspects and classifies high schools; has printed and distributes such matter as will encourage the work of public instruction and promote its uniformity; diffuses information as to the best methods of instruction; may indorse normal-school diplomas from other States; arranges dates for teachers' institutes and assists in preparing programs; appoints an assistant superintendent. |
| Massachusetts<br>Commissioner of education. | 5 | Appointed by the State board of education. | 6,500 | Is executive officer of State board of education; performs such duties as the board may direct; has supervision of all educational work supported in whole or in part by the State and reports thereon to the board; visits different parts of the State to assist educational work and diffuse information; publishes and distributes matter for the promotion of public-school education; conducts such teachers' institutes as are designated by the State board; collects information for annual report of board; is one of commissioners to invest and manage State school fund; is member of State teachers' retirement board. |
| Michigan<br>Superintendent of public instruction. | 2 | By vote of the people. | 4,000 | Is member and secretary of State board of education; is member of other boards having control of State educational institutions, with the right to speak but not to vote; has general supervision of public instruction, including State institutions; apportions primary school interest fund; prepares and has printed a course of study for district schools except city districts; directs supervision of county normal training classes; requires board |

*Digest of laws relating to chief State school officer*—Continued.

| State; title of officer. | Term of office, in years. | Manner of selection. | Salary. | Powers and duties. |
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| **Michigan** (contd)..... | ...... | ................ | ...... | of education to observe school laws; when necessary, examines school district accounts and may require report; requires districts to conduct schools for term required by law; fixes time and place and appoints instructors for State teachers' institute and for county institutes; removes for cause any member of a school board except in city school districts; prepares rules for township and district libraries; prescribes form for taking school census; prepares questions for examination of teachers; hears and determines appeals; approves schools for accredited list; grants permission to districts to establish schools for the deaf; approves courses of study for rural high schools; approves teachers and courses of study of county schools of agriculture. |
| **Minnesota**...........<br>Superintendent of education. | 4 | Appointed by the governor. | $4,500 | Has general supervision of public schools; apportions school funds to schools entitled to State aid; meets county and other superintendents for discussion of educational matters; prepares and distributes blanks, etc., for reports; enforces textbook law; provides for teachers' institutes in the several counties; conducts examinations for teachers and issues all certificates; indorses normal-school certificates to teach and may issue special certificates for music, drawing, etc.; hears and determines appeals; enforces a uniform system of accounts and reports; examines and approves plans and specifications for schoolhouses; is member of State normal-school board; is member of State high-school board; is member of State library board. |
| **Mississippi**...........<br>Superintendent of public education. | 4 | By vote of the people. | 2,500 | Is member and president of State board of education; has general supervision of the public schools; apportions State school fund to counties and separate districts; prepares questions for county teachers' examinations; visits and inspects county agricultural high schools and reports thereon to board of education; is member of board of trustees of higher educational institutions; is member of State textbook commission. |
| **Missouri**.............<br>Superintendent of public schools. | 4 | .....do........ | 3,000 | Is member and president of State board of education; has supervision of school funds; apportions school funds to counties; requires copies of records and such other information from county and district officers as he may deem important; prepares and furnishes blanks, etc., for reports; has school laws printed and distributed; confers with and advises school officers; visits and inspects schools; attends and assists in teachers' meetings; grants State teachers' certificates; visits and inspects high schools and publishes classified list; prescribes minimum course of study for each class; fixes time and place of county superintendents' convention; furnishes to county superintendents a list of publishers who have complied with textbook law; designates first-class high schools in which teachers' training courses may be offered; receives reports from State educational institutions; controls distribution of State aid to high schools and to rural schools. |
| **Montana**.............<br>Superintendent of public instruction. | 4 | .....do........ | 3,000 | Is member and secretary of State board of education; has general supervision of the public schools; apportions State school fund to counties; prepares courses of study for elementary and high schools and prescribes to what extent they shall be used; prepares and furnishes to school officers blanks, etc.; prescribes rules for holding teachers' institutes and summer schools, prepares list of instructors and attends and assists at such institutes; advises county superintendents; furnishes copies of school laws; hears and determines appeals; prepares questions for county teachers' examinations; may grant temporary State certificates; prepares list of books for school libraries. |

*Digest of laws relating to chief State school officer*—Continued.

| State; title of officer. | Term of office, in years. | Manner of selection. | Salary. | Powers and duties. |
|---|---|---|---|---|
| Nebraska............ Superintendent of public instruction. | 2 | By vote of the people. | $2,000 | Has general supervision of the public schools; apportions State school funds; has supervision of State aid to weak districts; has supervision of State-aided high schools, designating those to give courses in agriculture, manual training, and home economics, also those to conduct teacher-training courses; decides disputed points in school law; prescribes forms for reports and makes rules for all proceedings under the school laws; organizes and attends institutes; organizes and manages junior normals; issues State certificates and prepares questions for all teachers' examinations, both county and State, grades the answer papers and makes rules for the conduct of such examinations; approves city school certificates; furnishes approved price lists of textbooks to school districts; is member of State normal school board, State library commission, State dental board, and State board of embalmers. |
| Nevada.............. Superintendent of public instruction. | 4 | .....do......... | 3,600 | Is member and secretary of State board of education; apportions State school fund; apportions county school funds to districts; visits counties at least once in each year to conduct institutes, visits schools, etc.; prescribes rules for making reports and furnishes blanks, etc.; has school laws printed and furnished to school officers; holds State teachers' institutes biennially and district institutes on other years; may call county institutes; calls meetings of State board of education; nominates deputy superintendents to State board; requires reports from deputy superintendents; is curator of State museum; is director of orphans' home; appoints census marshals in new districts; fills vacancies on county boards for unexpired terms; makes arrangements for care of deaf, dumb, and blind; decides appeals from teachers and school boards; determines county school tax when county board fails so to do; sets apart fund for district school libraries. |
| New Hampshire..... Superintendent of public instruction. | ...... | Appointed by the governor; an indefinite term. He may be removed by governor and council for cause. | 4,000 | Has general supervision and control of educational interests of the State; may appoint three deputies at least one of whom shall be a woman; prescribes form of school registers and blanks for reports; compiles and publishes school laws; visits as many towns as practicable; organizes and holds at least one teachers' institute in each county annually and may employ instructors; assists school boards and superintendents in the introduction and development of vocational training; inspects and rates high schools; appoints inspectors of child labor; has authority to enforce attendance laws and laws relating to child labor; examines teachers and issues certificates; is member of State normal school board and official inspector of such schools; is regent of State board of medical examiners; approves hospital training schools. |
| New Jersey.......... Commissioner of education. | 5 | Appointed by the governor. | 10,000 | Under State board of education has general supervision of public schools; designates a clerk to serve as secretary of State board of education; appoints four assistant commissioners; apportions State funds to counties; may prescribe courses of study for elementary and high schools; prescribes methods of ascertaining what children are below normal; directs county collector to withhold State funds from delinquent districts; is one of the trustees of the school fund; is a member of all boards of examiners; appoints county superintendents; holds annual meetings of city and county superintendents; instructs city and county superintendents as to their duties in conduct of schools, construction of schoolhouses, etc.; directs withholding salary of teacher not complying with law; requires reports from institutions receiving State aid; prepares blanks for making all reports and conducting proceedings under school laws; causes school laws to be printed; decides controversies subject to appeal to board of education; loans plans for schoolhouses to districts and may require abandonment of unfit building; is member of public library commission. |

*Digest of laws relating to chief State school officer*—Continued.

| State; title of officer. | Term of office, in years. | Manner of selection. | Salary. | Powers and duties. |
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| **New Mexico**........ Superintendent of public instruction. | 4 | By vote of the people. | $3,000 | Is member and secretary of State board of education has general supervision of public education; apportions current school fund to counties; distributes State-aid fund to weak districts; has supervision over records and accounts of school boards; may suspend county superintendent for neglect of duty; visits counties as often as practicable to hold teachers' meetings, advise with county superintendents, etc.; appoints State director of industrial education; has printed and distributes blanks for reports; receives reports from school officers; has school laws printed; hears and decides controversies; enforces law relating to building of schoolhouses. |
| **New York**........... President of the university and commissioner of education. | (1) | Elected by the regents. | 10,000 | As president of the university, in addition to such other duties and functions as may otherwise be devolved upon him with the power and duty of general supervision over all educational work and activities in this State, it is his duty also to devote himself to educational research, to the study of the educational work of the systems of other jurisdictions and, with the approval of the regents, to introduce and originate so far as possible better methods of education and especially to endeavor in every feasible way to bring about the improved development and greater usefulness of the common schools of the State. He may attend all meetings of the board and its committees, submit matters for their consideration and participate in their discussion. The commissioner of education is alone eligible for election to the office of president. As commissioner of education, he is the chief executive officer of the State system of education and of the university. In case of vacancy the chancellor succeeds to and has the power of the commissioner, or if his office be vacant the succession devolves upon the vice chancellor or the senior regent or a deputy appointed by the same if he be at the same time a university officer or regent. The general powers and duties of the commissioner prescribed by the law comprise: Enforcement of all general and special laws relating to the educational system of the State and the execution of all educational policies determined by the regents; the general supervision over all schools and institutions, examinations, and inspections; general supervision of industrial schools, trade schools, and schools of agriculture, mechanic arts and home making; the general supervision of the State normal schools; membership on the boards of trustees of Cornell University, of Syracuse State College of Forestry, of Cobleskill Agricultural School, of the State College for Teachers; responsibility for the safe-keeping, proper use of the seal, the books, the records of the university and for the proper administration and discipline of t various offices and divisions of the department; the annulment of teachers' certificates and normal diplomas; the preparation and preservation of teachers' records; the preparation of registrars, blanks, forms and regulations affecting the common schools and their officers; the administration of oaths and affidavits relating to the duties of his office or the schools of the State; authority to furnish visual instruction through the schools, institutions, and organizations of the university; and the execution of such other powers and duties as he is charged with by the regents. |
| **North Carolina**..... Superintendent of public instruction. | 4 | By vote of the people. | 4,000 | Is member and secretary of State board of educatio signs all orders paid by State treasurer for school purposes; publishes school laws and sees to their enforcement; instructs school officers, who must obey his instructions and interpretation of the school law; has supervision of loaning of literary fund for construction of schoolhouses; prepares blanks, etc., for reports; prescribes courses of study |

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[1] During the pleasure of the regents.

*Digest of laws relating to chief State school officer*—Continued.

| State; title of officer. | Term of office, in years. | Manner of selection. | Salary. | Powers and duties. |
|---|---|---|---|---|
| North Carolina (con.). | ...... | ................ | ...... | for public high schools; is secretary of textbook commission; is chairman of State board of examiners; is member of boards of trustees of certain State educational institutions; makes rules for rural libraries and furnishes lists of books; is trustee of State library. |
| North Dakota........<br>Superintendent of public instruction. | 2 | By vote of the people. | $3,000 | Is member and president of State board of education; has general supervision of public schools, preparing and prescribing course of study for them; furnishes blanks for records and reports; holds meetings of county superintendents; has school laws printed and distributed to school officers; decides appeals; keeps sample copies and price lists of books furnished by publishers to districts; appoints inspector of State graded schools and high-school inspector; approves plans for schoolhouses; inspects agricultural and training schools; is member of board of university and school lands; is member of normal school board; is member of board of trustees of teachers' retirement fund; approves books for district libraries. |
| Ohio.................<br>Superintendent of public instruction. | 4 | Appointed by the governor. | 4,000 | Has general supervision of public education; has supervision of State school funds; requires reports from school officers and prescribes forms; makes an annual statistical report to the governor; has school laws printed and distributes to school officers; requires reports from private schools; on application by 3 taxpayers, appoints an examiner to audit a school district's account; submits abstract of enumeration of youth to State auditor for apportionment of school fund; requires reports of high schools and grades such schools; furnishes to districts names of publishers of textbooks with prices, etc.; prepares questions for examinations for county teacher's certificates; approves colleges granting degrees; appoints State board of examiners and countersigns all certificates issued by them; appoints a sufficient number of assistants; appoints high-school inspectors and supervisors of agricultural education; approves applications for State aid and rules of county examiners; standardizes the elementary schools of the State, furnishing suitable placards for same; issues provisional certificates and renews all professional (that is, 5 and 8 year) certificates; establishes teacher training courses in high schools; receives reports of city, county, and State school examiners. |
| Oklahoma...........<br>Superintendent of public instruction. | 4 | By vote of the people. | 2,500 | Is member and president of State board of education; has general supervision of educational interests; apportions State school fund to counties; publishes school laws; hears and decides controversies; furnishes blanks, etc., for reports; preserves records and school documents; appoints State school inspector; is member of commission on agricultural and industrial education. |
| Oregon..............<br>Superintendent of public instruction. | 4 | .....do........ | 3,000 | Is member and secretary of State board of education; has general supervision of county and district school officers and of the public schools; prepares questions for examinations of graduates of eighth grade; prescribes 2 years of course of study for high schools; visits, if practicable, every county annually; attends county institutes and assists in their organization and development; keeps statistics of schools; prepares blanks, etc., for uniform reports; compiles and annotates school laws; decides appeals or may submit them to State board; issues letters and circulars to school officers relative to the conduct of the schools; holds annual State teachers' association; appoints a board of 9 examiners to prepare questions for State examinations of teachers; appoints professional teachers to grade papers; issues State certificates; is member of State library commission; is member and secretary of trustees of State school for deaf mutes; classifies correspondence schools; prepares reading circle course and rules. |

*Digest of laws relating to chief State school officer*—Continued.

| State; title of officer. | Term of office, in years. | Manner of selection. | Salary. | Powers and duties. |
|---|---|---|---|---|
| Pennsylvania........ Superintendent of public instruction. | 4 | Appointed by the governor. | $5,000 | Is member and president of State board of education; has general supervision of public schools; apportions State appropriation; signs order of payment of State school funds to districts; prescribes minimum course of study for public schools; issues commissions to superintendents and assistant superintendents and fills vacancies in the county superintendencies; prepares blanks for reports from school officers; interprets school laws and advises relative to their enforcement; classifies high schools and prescribes rules for admission of pupils; may condemn school buildings unfit for use; issues State teachers' certificates and indorses normal school diplomas; appoints board of normal school examiners; holds meeting of normal school principals to make course of study. |
| Rhode Island........ Commissioner of public schools. | 1 | Elected by State board of education. | 5,000 | Is secretary of State board of education; apportions State appropriation for public schools; hears and decides appeals and prescribes rules for making appeals; visits towns to inspect schools; assists in securing uniformity of textbooks in all towns; prepares programs for Grand Army flag day and for Rhode Island independence day and other special days; approves unions of towns for employment of superintendents and draws order on treasurer for one-half of salaries; approves consolidation of schools; is one of managers of Rhode Island State College; holds teachers' institutes; is member of board of trustees of State normal school. |
| South Carolina....... Superintendent of education. | 2 | By vote of the people. | 1,900 | Is member and secretary of State board of education; has general supervision of public schools; visits counties to inspect schools and diffuse information; with advice of State board, secures uniformity of textbooks; prepares and furnishes registers, forms, etc., to county superintendents for making reports; has school laws printed; receives reports from State institutions of higher learning; is member of board of trustees of institute for deaf, dumb, and blind; is member of board of trustees of State university and State college for women. |
| South Dakota........ Superintendent of public instruction. | 2 | .....do........ | 1,800 | Has general supervision of all county and high schools and of city and county superintendents; meets county superintendents in annual convention to secure uniform administration of the school laws; inspects high schools; renders opinions regarding school laws; furnishes blanks for reports of county and city superintendents; attends teachers' institutes and prescribes rules for holding county normal institutes; furnishes list of institute conductors; holds annual meetings of institute conductors, holds examinations of teachers and issues State certificates; prepares questions for county examinations; is member of teachers' reading circle board of managers; is president of free library commission. |
| Tennessee............ Superintendent of public instruction. | 2 | Appointed by the governor. | 3,000 | Is member and secretary of State board of education; is chairman of State board of examiners; is member of all other educational bodies or associations; is treasurer of the Peabody Normal College fund; collects and disseminates statistical and other information regarding the public schools; makes inspection of public schools; holds county conferences of teachers; prepares and distributes blanks for reports of officers and teachers; has school laws printed and distributed and sees that they are carried out; may appoint persons in each county to examine schools and report thereon; requires county superintendents to report annually; reports scholastic population to State comptroller annually; has general supervision of county high schools; is member of State textbook commission; is member of free library commission; supervises work of the director of library extension. |

*Digest of laws relating to chief State school officer*—Continued.

| State; title of officer. | Term of office, in years. | Manner of selection. | Salary. | Powers and duties. |
|---|---|---|---|---|
| Texas<br>Superintendent of public instruction. | 2 | By vote of the people. | $2,500 | Is secretary of State board of education; apportions State school funds; has general supervision of public schools and of the administration of the school laws; hears and determines appeals from subordinate officers, but his decisions may be reversed by State board; prescribes forms for reports; approves accounts to be paid from school fund by State treasurer; issues instructions to school officers, which instructions are binding; has school laws printed and distributed; requires reports from county, city, and district officers; appoints State board of teachers' examiners and issues State certificates on their recommendation; prepares questions for county examinations; is member of State textbook commission; supervises summer normal institutes; has supervision of school census. |
| Utah<br>Superintendent of public instruction. | 4 | .....do | 3,000 | Is member and chairman of State board of education; has general supervision of public instruction; apportions State school funds; requires reports from counties and cities and withholds apportionment from those not reporting; prepares and furnishes forms, blanks, etc., for making reports; visits each county in the State at least once a year; may examine officers' accounts relative to school funds; holds annual conventions of county and city superintendents; with principal of State normal school and county superintendent constitutes governing board of teachers' institutes; is member of State textbook commission; is member of teachers' retirement commission for State at large; is member of commission to fix course of study; is member of juvenile court commission. |
| Vermont<br>Superintendent of education. | 3 | Elected by State board of education. | 2,000 | Is executive officer of the State board of education; has general supervision of public schools; prepares course of study for elementary schools as requisite for admission to high schools; issues circulars of information to officers and teachers; conducts summer schools for teachers in each county, or may combine two or more counties for such purpose; makes regulations governing the examination and certification of teachers; furnishes blanks, etc., for reports; prepares test cards for testing sight and hearing of pupils. |
| Virginia<br>Superintendent of public instruction. | 4 | By vote of the people. | 3,500 | Is member and president of the State board of education; is member of boards of visitors of State educational institutions; sees to execution of school laws; interprets school laws to school officials and his decisions are final unless reversed by State board; furnishes blanks and requires reports from division superintendents; may appoint persons to inspect schools in counties; makes inspection throughout the State; prepares scheme for apportioning State school funds; prescribes forms of contracts with teachers; signs warrants of State board issues teachers' certificates. |
| Washington<br>Superintendent of public instruction. | 4 | .....do | 3,000 | Is member and president of State board of education has general supervision of the public schools; apportions State school funds to counties; has blanks, etc., printed for reports and for the administration of the school laws; attends educational meetings and visits counties; has school law printed and distributed; hears and determines appeals; holds annual conventions of county superintendents; requires annual reports from educational institutions and county superintendents; keeps directory of regents and faculties of State educational institutions and of all teachers receiving certificates; issues State certificates; prepares a State manual; is member of board of visitors of State College; is member of commission on community welfare; is member of trustees of teachers' retirement fund. |

*Digest of laws relating to chief State school officer*—Continued.

| State; title of officer. | Term of office, in years. | Manner of selection. | Salary. | Powers and duties. |
|---|---|---|---|---|
| West Virginia........ Superintendent of free schools. | 4 | By vote of the people. | $4,000 | Is member of State board of education and appoints the other five members; has general supervision of public schools; apportions State school funds; issues manual of course of study prescribed by committee of State board on course of study; has control of matters relating to the issuance of teachers' certificates; sees that school laws are executed; furnishes blanks, etc., for reports and to secure uniformity in the school system; has school laws printed; hears and determines appeals; publishes lists of books suitable for school libraries; is member of regents of State normal schools and of all State educational institutions; appoints institute instructors; draws orders for county superintendents' salaries; provides for the examination and graduation of pupils who complete the course of study; inspects and classifies high schools and distributes State funds to such schools; distributes supplementary State aid to needy districts. |
| Wisconsin............ Superintendent of public instruction. | 4 | .....do........ | 5,000 | Has general supervision of the public schools; apportions school-fund income; attends educational meetings and makes investigation of educational systems and the condition of the public schools and disseminates educational information; prepares course of study for public schools; furnishes blanks for reports and requires reports from school officers; publishes school laws and hears and determines appeals; exercises general supervision over county schools of agriculture, manual training schools, county normal schools, and schools for the deaf; formulates course of study for such schools; holds annual county superintendents' convention; prescribes course of study for commercial schools and colleges; issues State teachers' certificates; makes regulations for the management of township and district libraries; is member of board of regents of the State university; is member of board of regents of board of trustees of teachers' retirement fund. |
| Wyoming............ Superintendent of public instruction. | 4 | .....do........ | 3,000 | Has general supervision of the public schools; apportions school funds to counties; prepares course of study for elementary schools; prepares and furnishes suitable forms, etc., for reports; makes rules and regulations for carrying school law into effect; appoints State board of examiners; issues certificates on recommendation of examiners; furnishes to districts price lists of textbooks. |

## STATE DEPARTMENTS OF EDUCATION STAFFS.

The following data were compiled from reports from the various State departments relative to the personnel of the State departments. In some instances the salaries paid were not given and in several States the number of persons employed in clerical positions was not reported.

| | | |
|---|---|---|
| *Alabama:* | | |
| State superintendent of education | | $3,000 |
| Secretary State board of examiners | | 2,400 |
| Two rural school agents | each | 2,500 |
| High-school inspector paid by State university | | |
| High-school inspector paid by Alabama Polytechnic Institute | | |
| Member State board of examiners | | 1,200 |
| Seven clerks | total | 8,280 |
| *Arizona:* | | |
| State superintendent of public instruction | | 3,000 |
| Assistant superintendent | | 2,000 |
| Two clerks | total | 2,100 |
| *Arkansas:* | | |
| State superintendent of public instruction | | 3,000 |
| Deputy | | |
| Assistant deputy | | |
| Professor of secondary education | | |
| Supervisor of rural schools | | 2,500 |
| State organizer of school improvement | | |
| Two clerks | | |
| Associate supervisor of rural schools | | 2,500 |
| *California:* | | |
| State superintendent of public instruction | | 5,000 |
| Deputy | | 2,400 |
| Statistician | | 2,400 |
| Commissioner of secondary schools | | 4,000 |
| Commissioner of elementary schools | | 4,000 |
| Commissioner of industrial and vocational education | | 4,000 |
| Chief clerk of State board of education | | 2,400 |
| Four clerks | total | 4,580 |
| Three clerks | | |
| *Colorado:* | | |
| State superintendent of public instruction | | 3,000 |
| Deputy State superintendent | | 1,800 |
| Three clerks | total | 3,600 |
| *Connecticut:* | | |
| Secretary of State board of education | | 3,500 |
| Eight attendance agents | | |
| Thirty supervising agents | | |
| Two supervisors of agriculture | | |
| Sixteen clerks | | |

| | | |
|---|---|---|
| *Delaware:* | | |
| Commissioner of education | | $2,000 |
| One clerk (part time) | | |
| *Florida:* | | |
| Superintendent of public instruction | | 3,600 |
| Two rural school inspectors | | 2,000 |
| Chief clerk | | 1,800 |
| Statistician | | 1,200 |
| Stenographer | | 900 |
| *Georgia:* | | |
| State superintendent of schools | | 3,000 |
| Rural school agent | | 2,500 |
| Special supervisor (for negroes) | | 2,500 |
| Three State supervisors of rural schools | each | 2,000 |
| Three clerks | total | 3,300 |
| *Idaho:* | | |
| Superintendent of public instruction | | 2,400 |
| Assistant State superintendent | | 1,750 |
| Auditor | | 2,100 |
| Three clerks | | |
| Commissioner of education | | 6,000 |
| *Illinois:* | | |
| Superintendent of public instruction | | 7,500 |
| Department of law | | |
| High-school inspector | | |
| Two inspectors of country and village schools | | |
| Two statisticians | | |
| Publicity agent | | |
| Clerks | | |
| *Indiana:* | | |
| Superintendent of public instruction | | 5,000 |
| Assistant superintendent | | 2,500 |
| Deputy superintendent | | 1,800 |
| High-school inspector | | 2,500 |
| Two vocational supervisors | each | 4,250 |
| Clerk of State board of education and head of manuscript department | | |
| Chief clerk | | 1,400 |
| Four other clerks | | |
| *Iowa:* | | |
| Superintendent of public instruction | | 4,000 |
| Deputy superintendent | | 2,500 |
| Inspector normal training in high school | | 2,000 |
| Inspector rural and consolidated schools | | 2,000 |
| Two inspectors State graded and high schools | each | 2,000 |
| Chief clerk | | 1,500 |
| *Kansas:* | | |
| State superintendent of public instruction | | 2,500 |
| Assistant superintendent of public instruction | | 1,600 |
| Chief clerk | | 1,200 |
| Statistical clerk | | 1,000 |
| Two clerks | each | 900 |

| | | |
|---|---|---|
| *Kentucky:* | | |
| Superintendent of public instruction | | $4,000 |
| Assistant superintendent | | |
| Two inspectors of schools | | |
| Supervisor of secondary schools | | |
| Two supervisors of rural elementary schools | | |
| Six clerks | | |
| *Louisiana:* | | |
| Superintendent of public education | | 5,000 |
| High-school inspector | | 3,000 |
| Three rural school inspectors | total | 7,500 |
| Chief clerk | total | 1,800 |
| Two clerks | total | 2,700 |
| Chairman examination committee | total | 3,000 |
| *Maine:* | | |
| State superintendent of public schools | | 4,000 |
| Clerk and deputy | | 1,500 |
| State inspector of high schools | | 1,350 |
| General agent for schools in unorganized townships | | 1,350 |
| Supervisor of practical arts | | 2,000 |
| Supervisor of household arts | | 1,500 |
| Four clerks | | |
| *Maryland:* | | |
| State superintendent of public instruction | | 3,000 |
| Assistant State superintendent | | 2,000 |
| Clerk | | 1,000 |
| Supervisor of secondary agriculture (State Agricultural College) | | |
| *Massachusetts:* | | |
| Commissioner of education | | 6,500 |
| Two deputy commissioners of education | each | 4,500 |
| Eight agents of board of education | total | 20,700 |
| Chief clerk | | 1,500 |
| Eleven clerks | | |
| *Michigan:* | | |
| Superintendent of public instruction | | 4,000 |
| Deputy superintendent | | 2,500 |
| Assistant superintendent | | 1,800 |
| Chief clerk | | 1,200 |
| Statistician | | 1,100 |
| Twelve clerks | | |
| *Minnesota:* | | |
| Superintendent of education | | 4,500 |
| Assistant superintendent | | 2,800 |
| Assistant | | 2,000 |
| High-school inspector | | 3,000 |
| Graded-school inspector | | 3,000 |
| Director teachers' employment bureau | | 3,000 |
| Supervisor teacher's training departments | | 2,000 |
| Rural school commissioner | | 2,400 |
| Commissioner of school buildings | | 1,500 |
| Supervisor school libraries | | 1,200 |

| | | |
|---|---|---|
| *Mississippi:* | | |
| Superintendent of public instruction | | $2,500 |
| Rural-school supervisor | | 2,500 |
| Supervisor school improvement | | 2,000 |
| Two clerks | each | 900 |
| *Missouri:* | | |
| State superintendent of schools | | 3,000 |
| Chief clerk | | 2,400 |
| Statistician | | 1,800 |
| Teacher-training inspector | | 2,200 |
| Two high-school inspectors | each | 1,800 |
| Rural-school inspector | | 1,800 |
| Three clerks | | |
| *Montana:* | | |
| State superintendent | | 3,000 |
| Deputy superintendent | | 2,100 |
| Rural-school inspector | | 2,100 |
| Two clerks | each | 1,200 |
| *Nebraska:* | | |
| State superintendent | | 2,000 |
| Deputy superintendent | | 1,800 |
| Assistant superintendent | | 1,800 |
| Normal-training inspector | | 2,000 |
| Rural-school inspector | | 1,800 |
| Secretary and compiler | | 1,800 |
| Six assistant | total | 6,000 |
| *Nevada:* | | |
| State superintendent of public instruction | | 3,600 |
| Five deputies | total | 10,000 |
| One clerk | | 900 |
| *New Hampshire:* | | |
| Superintendent of public instruction | | 4,000 |
| Deputy State superintendent in charge of practical arts work | | |
| Deputy State superintendent in charge of office | | |
| Deputy State superintendent in charge of high-school inspection | | |
| Registrar and chief clerk | | |
| Two factory inspectors, child-labor service | | |
| Inspector in compulsory attendance service | | |
| Three clerks | | |
| *New Mexico:* | | |
| Superintendent of public instruction | | 3,000 |
| Assistant superintendent | | 2,000 |
| Chief clerk | | 1,500 |
| State director of industrial education | | 1,000 |
| Clerk | | 900 |
| *New Jersey:* | | |
| Commissioner of education | | 10,000 |
| Deputy commissioner of education | | 4,500 |
| Three assistant commissioners | each | 4,500 |
| Chief clerk | | 3,000 |
| Secretary State board of examiners | | 3,000 |
| Inspector buildings | | 2,000 |
| Inspector of accounts | | 2,000 |
| Twelve clerks | total | 10,650 |

| | | |
|---|---|---|
| *New York:* | | |
| Commissioner of education | | $10,000 |
| Three assistant commissioners | each | 5,000 |
| Director State library | | 5,000 |
| Chiefs of divisions of history, law, public records and science | each | 4,500 |
| Chiefs of divisions of examination, vocational schools | | 4,000 |
| Secretary board of medical examiners | | 4,000 |
| Chiefs of divisions of administration, attendance, and inspections | each | 3,500 |
| Chiefs of divisions of educational extension, school libraries, visual instruction, and statistics | each | 3,000 |
| Secretary pharmacy board | | 3,000 |
| Specialist in agriculture | | 2,750 |
| Vice director library school | | 2,500 |
| Secretary teachers retirement fund board | | 2,000 |
| Specialist in vocational education for girls | | 1,800 |
| Seventeen inspectors | total | 42,300 |
| Three hundred and thirteen assistants and clerks | | |
| *North Carolina:* | | |
| State superintendent of public instruction | | 3,000 |
| Two State agents for rural schools | each | 2,500 |
| Inspector of high schools | | 2,500 |
| Supervisor teacher training | | 2,000 |
| Statistical secretary | | 1,500 |
| Chief clerk | | 1,800 |
| Two clerks | total | 1,500 |
| *North Dakota:* | | |
| State superintendent of public instruction | | 3,000 |
| Deputy | | 2,400 |
| Rural-school inspector | | 2,000 |
| High-school inspector | | 2,000 |
| Three clerks | | |
| *Ohio:* | | |
| Superintendent of public instruction | | 4,000 |
| Assistant superintendent | | 2,500 |
| Chief clerk | | 1,750 |
| Examination clerk | | 1,800 |
| Statistician | | 1,500 |
| Supervisor of normal schools | | 3,600 |
| Supervisor of rural schools | | 2,000 |
| Four agricultural supervisors | each | 2,000 |
| Two high-school inspectors (full time) | each | 2,000 |
| Five high-school inspectors (half time) | each | 1,000 |
| Four clerks | total | 5,040 |
| *Oklahoma:* | | |
| State superintendent of public instruction | | 2,500 |
| Assistant superintendent | | 1,800 |
| Statistician | | 1,600 |
| Secretary State board of education | | 2,000 |
| High-school inspector | | 2,000 |
| Chief clerk | | 1,600 |
| Three clerks | total | 3,400 |

| | | |
|---|---|---|
| *Oregon:* | | |
| Superintendent of public instruction | | $3,000 |
| Two assistant State superintendents | total | 4,300 |
| Two field workers | total | 3,800 |
| Three clerks | | |
| *Pennsylvania:* | | |
| Superintendent of public instruction | | 5,000 |
| Two deputy superintendents | each | 2,000 |
| Four high-school inspectors | each | 2,000 |
| Expert, agricultural education | | 2,000 |
| Expert, industrial education | | 2,000 |
| Expert, drawing | | 2,000 |
| Four clerks | each | 1,400 |
| Five stenographers | each | 1,000 |
| Three examiners and school visitors, bureau of professional education | | |
| *Rhode Island:* | | |
| Commissioner of public schools | | 5,000 |
| Assistant commissioner | | |
| Four clerks | | |
| *South Carolina:* | | |
| State superintendent of education | | 1,900 |
| Assistant State superintendent | | |
| State high-school inspector | | |
| State supervisor of elementary rural schools | | |
| *South Dakota:* | | |
| State superintendent | | 1,800 |
| Deputy superintendent | | |
| Three clerks | | |
| *Tennessee:* | | |
| Superintendent of public instruction | | 3,000 |
| Chief clerk | | 2,000 |
| High-school inspector | | 2,500 |
| Head clerk | | 1,200 |
| Three clerks | | |
| Supervisor of industrial work | | 2,100 |
| Supervisor of elementary schools | | 2,500 |
| Supervisor of elementary schools for negroes | | 2,500 |
| *Texas:* | | |
| State superintendent of public instruction | | 2,500 |
| Assistant to State superintendent | | |
| Chief clerk | | |
| Statistician | | |
| Auditor | | |
| Four clerks | | |
| *Utah:* | | |
| State superintendent of public instruction | | 3,000 |
| State high-school inspector | | |
| Chief clerk | | |
| Five clerks | | |
| *Vermont:* | | |
| State superintendent of education | | 2,500 |
| Chief clerk | | 900 |
| Chief statistician | | 700 |

*Virginia:*

| | | |
|---|---|---|
| Superintendent of public instruction | | $3,500 |
| Chief clerk and secretary to State board of education | | 2,750 |
| Three inspectors for white schools | each | 2,000 |
| Inspector for colored schools | | 2,500 |
| Statistical clerk | | 2,000 |
| Six clerks | total | 6,000 |

*Washington:*

| | | |
|---|---|---|
| State superintendent of public instruction | | 3,000 |
| Assistant superintendent | | 1,800 |
| Deputy superintendent | | 1,800 |
| High-school inspector | | 2,000 |
| Secretary State board of examiners | | 1,200 |
| Field organizer for agricultural and industrial work | | |
| Four clerks, total | | 3,900 |

*West Virginia:*

| | | |
|---|---|---|
| State superintendent | | 4,000 |
| Chief clerk | | 1,800 |
| Supervisor of high schools | | 2,500 |
| Supervisor of rural schools | | 2,500 |
| Supervisor of examinations | | 1,800 |
| Secretary State board of regents | | 2,500 |
| Chief statistician | | 1,200 |
| Supervisor of agricultural education (part time) | | 600 |
| Supervisor of rural schools for negroes (part time) | | 600 |
| Four clerks | total | 4,120 |

*Wisconsin:*

| | | |
|---|---|---|
| State superintendent | | 5,000 |
| Assistant superintendent | | |
| Assistant for industrial education | | |
| Chief clerk | | |
| Two high-school inspectors | | |
| Two rural-school inspectors | | |
| Five school inspectors | | |
| One inspector of domestic science | | |
| One inspector of schools for deaf | | |
| Two library clerks | | |
| Certificate clerk | | |
| Other clerks | | |

*Wyoming:*

| | | |
|---|---|---|
| State superintendent of public instruction | | 3,000 |
| Deputy State superintendent of public instruction | | 1,500 |

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# A STUDY OF THE COLLEGES AND HIGH SCHOOLS IN THE NORTH CENTRAL ASSOCIATION

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# A STUDY OF THE COLLEGES AND HIGH SCHOOLS IN THE NORTH CENTRAL ASSOCIATION.

## PART I.—REPORT ON THE APPROVED COLLEGES AND UNIVERSITIES OF THE NORTH CENTRAL ASSOCIATION OF COLLEGES AND SECONDARY SCHOOLS.

By Charles H. Judd,
*Secretary of the Commission of the Association.*

### INTRODUCTION.

At the meeting of the North Central Association held in 1913 a list of colleges and universities prepared on the basis of standards previously adopted by the association was approved and ordered to be published. Furthermore, the officers of the commission were directed to prepare and publish a summary of all of the returns made by colleges and universities on the blanks used in collecting information. At the meeting held in March, 1914, by the same routine, a revised list was prepared and approved. The approved list of 1914 is based on the same standards as the earlier list. These standards are as follows:

### Standards of Accrediting Colleges and Universities.

The standard American college is a college with a four-year curriculum with a tendency to differentiate its parts in such a way that the first two years are a continuation of, and a supplement to, the work of secondary instruction as given in the high school, while the last two years are shaped more or less distinctly in the direction of special, professional, or university instruction.

The following constitute the standards for accrediting colleges for the present year:

1. The minimum scholastic requirement of all college teachers shall be equivalent to graduation from a college belonging to this association, and graduate work equal at least to that required for a master's degree. Graduate study and training in research equivalent to that required for the Ph. D. degree are urgently recommended, but the teacher's success is to be determined by the efficiency of his teaching, as well as by his research work.

2. The college shall require for admission not less than 14 secondary units, as defined by this association.

3. The college shall require not less than 120 semester hours for graduation.

4. The college shall be provided with library and laboratory equipment sufficient to develop fully and illustrate each course announced.

5. The college, if a corporate institution, shall possess a productive endowment of not less than $200,000.

6. The college, if a tax-supported institution, shall receive an annual income of not less than $100,000.

7. The college shall maintain at least eight distinct departments in liberal arts, each with at least one professor giving full time to the college work in that department.

8. The location and construction of the buildings, the lighting, heating, and ventilation of the rooms, the nature of the laboratories, corridors, closets, water supply, school furniture, apparatus, and methods of cleaning shall be such as to insure hygienic conditions for both students and teachers.

9. The number of hours of work given by each teacher will vary in the different departments. To determine this, the amount of preparation required for the class and the time needed for study to keep abreast of the subject, together with the number of students, must be taken into account; but in no case shall more than 18 hours per week be required, 15 being recommended as a maximum.

10. The college must be able to prepare its graduates to enter recognized graduate schools as candidates for advanced degrees.

11. The college should limit the number of students in a recitation or laboratory class to 30.

12. The character of the curriculum, the efficiency of instruction, the scientific spirit, the standard for regular degrees, the conservatism in granting honorary degrees, and the tone of the institution shall also be factors in determining eligibility.

No institution shall be accredited or retained on the accredited list unless a regular blank has been filed with the commission, and is filed triennially unless the inspectors have waived the presentation of the triennial blank.

## The following blank was employed in securing statistics in 1914:

### STATISTICAL INQUIRY.

Name of institution.................................. Address...................
President.............................. Registrar....................................
Control (sectarian, State, or other)...............................................

Educational organization. Draw a line through the name of each division or school which is represented in your institution by a separate organization. If the work is organized merely as a department, do not mark the name in this list; mark only the college or school including that department. Graduate school, college of liberal arts, college of science, engineering school, school of mines, school of civil engineering, school of chemistry, school of electrical engineering, college of music, college of agriculture, law school, medical school, school of education, school of fine arts (other than music), school of pharmacy, school of dentistry, school of oratory, school of commerce.

Mention any others...............................................................
Do you have a preparatory department? ..........................................
Does the same student in any case take both preparatory and college courses? .......

In case students do thus take courses in preparatory and college classes, do not include them in any of the answers of this report dealing with students.

Is the preparatory department separate in equipment from the rest of the institution? .................................................................

What per cent of the preparatory faculty is entirely occupied in preparatory teaching? .................................................................

---

#### ADMISSION TO COLLEGE.

How many units required for admission to college? ..............................................
Maximum number of admission conditions allowed in college.........................................
Are students admitted on certificate from schools not on this association's list? .........................
If so, what steps are taken to determine the adequacy of preparation in such schools? ................

### REGISTRATION AND GRADUATION.

Number of new students entering this year..........

Number of students attending classes at this date (include all departments above the preparatory)..........

Number of students in college of arts and science..........

Distinguish between two classes of special or unclassified students and report for each:

(a) Those who are mature and are allowed access to classes without detailed classification..........

(b) Those who are conditioned or otherwise recognized as unqualified to receive regular classification. Include here all conditioned students whether technically special or not..........

Number of hours required for graduation (express in semester hours or quarter hours)..........

Do you require physical education or public speaking? ..........

If so, are these requirements included in above statement of hours? ..........

Number of all degrees granted last academic year for work in course (give details, stating specifically number of each degree)..........

Number of all honorary degrees granted last academic year (give details, stating specifically number of each degree)..........

### GRADUATE STUDY.

Are graduates now pursuing graduate courses? If so, where (mention four or five institutions, giving where possible the names of students so that their records may be looked up)? ..........

### SIZE OF DIVISION.

(By "division" is meant a group of students meeting together for a regular exercise in a course. Thus, if there is one meeting of a chemistry class for lecture and this class then breaks up into laboratory divisions, treat this as one lecture division and as several laboratory divisions.)

Number of students in each of the five largest lecture divisions..........

Number in five largest recitation divisions..........

Number in five largest laboratory divisions..........

Number of students in each of the five smallest divisions..........

Exact average of all divisions. (If this average can not be given exactly, mark it as estimate)..........

### FACULTY.

(The distinction between those who are responsible for classes and assistants who are not full members of the faculty is the matter referred to in the first question.)

Number of faculty members in independent charge of classes..........

Number of faculty members giving both college and preparatory work..........

Number of faculty members giving part time to regular, salaried engagements outside college..........

### FACULTY RANK.

(Do not include in this list student assistants except in the last item.)

| | *Men.* | *Women.* |
|---|---|---|
| Professors.......... | .......... | .......... |
| Associate professors.......... | .......... | .......... |
| Assistant professors.......... | .......... | .......... |
| Instructors.......... | .......... | .......... |
| Lower ranks.......... | .......... | .......... |

### DEPARTMENTS.

Check the departments in the following list in which at least the full time of one professor is devoted to college instruction to the exclusion of any other teaching:

English, modern languages, ancient languages, history, social science, mathematics, physical science, biological science.

### INSTRUCTION.

In this paragraph distinguish between laboratory work and lecture or recitation exercises. Report the full time; do not treat two hours of laboratory work as equivalent to one hour of recitation.

Number of hours per week of instruction given by five members of faculty in each of the classes (a) and (b) who have the heaviest program: (a) Including laboratory ..........; (b) recitation or lecture only ..........

### TRAINING OF FACULTY.

Number members of faculty responsible for classes who are not college graduates..........

Number of same who have not taken graduate work..........

### MATERIAL EQUIPMENT.

Value of grounds (not including buildings)..........

Buildings other than dormitories: Number ..........; aggregate value..........

Dormitories and residences: Number ..........; aggregate value ..........

Equipment other than buildings and grounds:
  Books—Number ..........; value ..........
  Laboratory equipment used in science instruction ....................................
  Other apparatus and furnishings of all kinds—value....................................
Indebtedness ..........................................................................
If there is any reason why indebtedness should not be subtracted from productive endowment, explain why.
..........................................................................................
Endowment, as given in your ordinary reports..........................................
Productive endowment (include under this item only funds free from all liens of any kind. Do not include annuities; do not include investment in dormitories)....................................
Income from endowment.....................................................................
Income other than special gifts and endowment: State ......; denomination ......; other sources (not including tuition) ......; tuition .......
Special gifts last academic year............................................................
Expenditures last academic year:
  Salaries paid for instruction and administration in college or university.....................
  Salaries in other divisions: Preparatory ..........; buildings and grounds salaries ..........
  Erection of new buildings...............................................................
  Equipment other than books.............................................................
  Books......................................................................................

These blanks were sent to all institutions which were included in the list of 1913 and also to all institutions which, in the course of the year, made application to the secretary of the commission for consideration at the 1914 meeting. Attention should be called explicitly to the fact that the approved list has never purported to include the names of all worthy institutions in the territory of the association. Initiative has always been left entirely to the institutions; and unless they explicitly applied for admission to the association, their cases have never been canvassed.

The officers of the commission, acting as a committee on the approved list, rendered a report suggesting a modification in the mode of procedure of the association. This report, which is given in full below, was adopted by the association and will be the basis of procedure at the meeting of the commission in 1915.

### REPORT OF THE OFFICERS OF THE COMMISSION.

The officers of the commission were directed to bring in recommendations regarding two matters: First, a suitable definition of junior colleges, and second, the disposition of the cases of those normal schools and teachers' colleges which have been for some time members of the association and were last year put on an unclassified list. In attempting to deal with these matters, and also in the course of their revision of the approved list of colleges, your committee has become increasingly aware of the marked differences between the institutions in this territory which receive graduates of high schools and continue the education of such graduates. The present standards for colleges and universities were evidently drawn up with the college of arts and science as the chief, if not the sole object of consideration. In view of the present standards, the association obviously has before it two possible courses. The present standards can be maintained and strengthened, when membership in the association will be limited; or a policy of expansion can be adopted which will necessitate a modification of the standards and a thorough revision of the approved list.

The small exclusive membership seems at first sight to have certain advantages. The relation to high schools seems to be relatively simple. The association promises to be fairly homogeneous. The standards are relatively easy to enforce. On the other hand, it is to be noted that even the present small list includes institutions of widely different character. For example, about one-half of the institutions on the approved list pay their faculties less than $30,000 per annum, while at the other end of the list are institutions paying their faculties $500,000 or more. These figures show that in range of courses and in point of size the institutions now on the list differ very widely; so that the effort to keep relations within the association simple can hardly be expected to succeed.

All these considerations have led your committee to the recommendation which they now submit, that the list of approved institutions be enlarged. It is recommended that an alphabetical list of all institutions which continue the education of students beyond 15 units of high-school work be prepared. Following the name of the institution shall be set down an exact statement of certain facts, such as the following:

(1) Number of the faculty in independent charge of classes.
(2) Number of faculty with the degree of doctor of philosophy.
(3) Number of matriculated students.
(4) Number of degrees granted in course.
(5) Number of elementary courses of instruction actually given.
(6) Number of advanced courses.
(7) Number of professional courses.
(8) Expenditures for salaries.
(9) Hours of class instruction required of members of the faculty.
(10) Material equipment.

This list shall then be submitted to the commission, and the commission shall determine its standards with the facts before it. Thus the commission shall determine the limits permitted in each of the categories above described. Furthermore, the categories which are deemed essential to admission to a classified list shall be determined, and the list shall then be made up automatically, subject to annual review. The approved list and the facts which it presents shall be published.

The officers of the commission do not, it will be observed, offer in this plan any definition of a junior college, nor do they distinguish between colleges and universities, or colleges and normal schools. They recommend rather a comprehensive formula including all grades of institutions. They anticipate that the result of the adoption of this plan will be the ultimate development of a system of rating which may be used for high schools as well as for higher institutions.

The administrative system for carrying out the enterprise is not negligible. The officers recommend the following plan of operation: When a new institution applies for admission to the list, it shall pay a fee of $25. It shall further open its records to the officers of the commission and fill out such blanks as the officers shall prepare under the approval of the commission. An institution on the approved list shall be responsible at intervals of at least three years to supply in a form to be determined by the commission such information as may be necessary to keep the approved list revised and up to date. An annual fee of $10 shall be paid by all institutions on the list, except that no institution shall pay the $10 fee in the same year that it has paid the inspection fee of $25. The officers of the commission shall be empowered to use the fund thus created for purposes of personal visit to institutions, for blanks, correspondence, and for printing of reports. A comprehensive annual report shall be printed showing the operations of the commission in the preparation of the final list.

In preparing the list of colleges and universities for 1914 the officers of the commission scrutinized with special care those institutions in the list of 1913 which stood low in the tables reported for the year 1913; that is, if an institution had a large indebtedness, note was made of the fact that in Table XXIII of the report of 1913 that particular institution had a low standing; if the number of books in the library was small, note was made of the fact that that particular institution had a low rating in Table XXII, and so on through the list. When it was found that a given institution had low rating in several different tables, this institution was set aside to be especially examined by the committee. If, on the other hand, an institution had a low standing in only one or two of the tables and the report rendered in 1914 on the blank was substantially the same as that of the previous year, the committee passed favorably on the institution without hesitation.

In addition to the information which was presented in the report of 1913, the committee also utilized the returns given to the Comissioner of Education of the United States by the colleges on the approved list. A careful tabulation was made of the facts reported to the Commissioner of Education; and the colleges were rated in the order of their high standing in the various items collected by the Bureau of Education. It was found that the 10 institutions which were dropped from the approved list of 1913 because of their low standing in the tables of the North Central Association also appeared among the 13 lowest in the classification based upon the returns to the Commissioner of Education. Special note should be made of the fact that the University of Kentucky disappeared from the approved list of the North Central Association wholly on the ground that this institution lies within the territory of the Southern Association, and it was deemed wise, both in the cases of high schools and colleges, to leave the Southern Association to deal with all institutions in its own territory. The list of 72 colleges and universities as finally approved in 1914 includes 10 new institutions not in the list of 1913. The new institutions are in italics. The full list is as follows:

### LIST OF APPROVED COLLEGES AND UNIVERSITIES OF THE NORTH CENTRAL ASSOCIATION, 1914.

Ohio:
- Case School of Applied Science, Cleveland.
- Denison University, Granville.
- Heidelberg University, Tiffin.
- *Hiram College, Hiram.*
- Kenyon College, Gambier.
- Lake Erie College, Painesville.
- Marietta College, Marietta.
- Miami University, Oxford.
- Mount Union College, Alliance.
- Oberlin College, Oberlin.
- Ohio State University, Columbus.
- Ohio University, Athens.
- Ohio Wesleyan University, Delaware.
- Otterbein University, Westerville.
- *Municipal University of Akron, Akron.*

Ohio—Continued.
- University of Cincinnati, Cincinnati.
- Western College for Women, Oxford.
- Western Reserve University, Cleveland.

Michigan:
- University of Michigan, Ann Arbor.

Indiana:
- Indiana University, Bloomington.
- Purdue University, La Fayette.
- University of Notre Dame, Notre Dame.
- Wabash College, Crawfordsville.

Illinois:
- Augustana College, Rock Island.
- Bradley Polytechnic Institute, Junior College, Peoria.

LIST OF APPROVED COLLEGES AND UNIVERSITIES OF THE NORTH CENTRAL ASSOCIATION, 1914—Continued.

Illinois—Continued.
- Illinois College, Jacksonville.
- Illinois Woman's College, Jacksonville.
- Knox College, Galesburg.
- Lake Forest College, Lake Forest.
- Lewis Institute, Junior College, Chicago.
- *Lombard College, Galesburg.*
- *James Millikin University, Decatur.*
- Monmouth College, Monmouth.
- *Northwestern College, Naperville.*
- Northwestern University, Evanston.
- Rockford College for Women, Rockford.
- University of Chicago, Chicago.
- University of Illinois, Urbana.

Wisconsin:
- Beloit College, Beloit.
- Carroll College, Waukesha.
- Lawrence College, Appleton.
- Milwaukee-Downer College, Milwaukee.
- Ripon College, Ripon.
- University of Wisconsin, Madison.

Minnesota:
- Carleton College, Northfield.
- *Hamlin University, St. Paul.*
- University of Minnesota, Minneapolis.

Iowa:
- Coe College, Cedar Rapids.
- Cornell College, Mount Vernon.
- Drake University, Des Moines.
- Grinnell College, Grinnell.

Iowa—Continued.
- Morningside College, Sioux City.
- Parsons College, Fairfield.
- Simpson College, Indianola.
- State University of Iowa, Iowa City.

Missouri:
- Park College, Parkville.
- University of Missouri, Columbia.
- Washington University, St. Louis.

Nebraska:
- Doane College, Crete.
- *Nebraska Wesleyan University, University Place.*
- University of Nebraska, Lincoln.

Kansas:
- Baker University, Baldwin.
- College of Emporia, Emporia.
- *Ottawa University, Ottawa.*
- University of Kansas, Lawrence.
- Washburn College, Topeka.

Colorado:
- University of Colorado, Boulder.
- *University of Denver, University Park.*

Oklahoma:
- University of Oklahoma, Norman.

South Dakota:
- State University of South Dakota, Vermilion.

North Dakota:
- University of North Dakota, University.

Montana:
- *State University of Montana, Missoula.*

*Unclassified list of teachers' colleges and normal schools adopted for the year 1914–15.*

- Illinois State Normal University, Normal, Ill.
- Southern Illinois State Normal University, Carbondale, Ill.
- Western Illinois State Normal School, Macomb, Ill.
- Winona State Normal School, Winona, Minn.
- Iowa State Teachers' College, Cedar Falls, Iowa.
- State Normal School, Kirksville, Mo.

The details of the reports received on the 1914 blanks are summarized in the following pages. The numbers of the tables are the same as in the report for 1913.[1]

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[1] Published as monograph supplement No. IV of the School Review.

## CONTROL.

Twenty-eight of the institutions in the list of 1914 are independent of State or denominational control. This is an increase of six over the number of independent institutions included in the list of 1913. On the other hand, the number of denominational institutions is less. In 1913 it was 31; in the list of 1914 there are only 24 such institutions; 10 of these 24 are under the control of the Methodist Church; 7 are under the control of the Presbyterian Church. The others belong to various other denominations. The degree to which denominations support the institutions connected with them is presented in the following table. A new institution under municipal control appears in the list of 1914. This is the University of Akron in Ohio. Buchtel College was turned over by its trustees to the municipality of Akron.

TABLE I.—*Denominational support of educational institutions.*

| | | | |
|---|---|---|---|
| None | 3 | $5,000-$7,000 | 2 |
| Indefinite | 1 | $10,000-$11,000 | 2 |
| Less than $1,000 | 5 | $13,000-$14,000 | 1 |
| $1,000-$2,000 | 2 | $15,000-$16,000 | 1 |
| $2,000-$3,000 | 2 | $25,000-$26,000 | 1 |
| $3,000-$4,000 | 1 | $30,000-$40,000 | 1 |
| $4,000-$5,000 | 2 | | |

## EDUCATIONAL ORGANIZATION.

Seventeen of the institutions in the list of 1914, as contrasted with 16 in 1913, report no departments other than the college of arts, literature, and science. Two engineering institutions continue to hold their place in the list. The details of organization of the institutions are presented in Table II.

TABLE II.—*Number of institutions reporting special departments.*

| | | | | | |
|---|---|---|---|---|---|
| Music | 27 | Engineering | 18 | Agriculture | 6 |
| Fine art | 11 | Electrical engineering | 2 | Oratory | 8 |
| Medicine | 18 | Civil engineering | 2 | Commerce | 13 |
| Pharmacy | 13 | Mining engineering | 3 | Divinity | 3 |
| Dentistry | 7 | Chemical engineering | 2 | Education | 18 |
| Law | 23 | Architecture | 1 | Others | 19 |

## ADMISSIONS.

In general it may be said that there is a tendency for specific requirements of admission to be relaxed. There is, on the other hand, a clear tendency to make more rigid the adherence to the requirements for admission which the institutions announce. Two institutions on the list of 1914 admit students presenting 14 units of preparatory work. This is one less than in the list of 1913. Sixty-four institutions require 15 units; six require 16.

### CONDITIONS.

The following table shows all of the facts with regard to the admission of students with conditions. Especial attention is to be drawn to the fact that 9 institutions allow no conditions, as contrasted with 5 in 1913; 23 allow only one condition, as contrasted with 18 in 1913. This shows a marked tendency to enforce requirements more fully than a year ago.

TABLE III.—*Admission of students with conditions.*

| Units required. | Number of institutions allowing no conditions. | Allowing one condition. | One and one-half conditions. | Two conditions. | Three conditions. | Total. |
|---|---|---|---|---|---|---|
| 14 | 1 | 0 | 1 | 0 | 0 | 2 |
| 15 | 8 | 23 | 5 | 24 | 3 | 63 |
| 16 | 0 | 0 | 0 | 4 | 2 | 6 |

### METHODS OF ADMISSION.

The practice of institutions in admitting students from high schools not on the approved list is much the same as it was last year. State lists are evidently much more liberal than the lists of the North Central Association. In Bulletin No. 29 for the year 1913 the United States Bureau of Education presented a list of all of the accredited secondary schools in the United States.[1] This list shows very clearly that institutions in this association are much more liberal in their policies of admission than is the North Central Association. In the Southern Association the question has been raised very pointedly whether it is wise to make a list of secondary schools which shall be so exclusive that no institution can base its admissions entirely on this list. If the North Central Association is to have a small exclusive list of secondary schools to which little or no attention is paid in the various States, its influence is not likely to increase. The statement that the North Central list is used as the basis of admission when students go outside the State probably has little force in actual practice. Furthermore, the number of students who go outside of the territory of the State institution to which they are most directly related is so small that this particular motive on the part of a high school for securing admission to the association's list is relatively weak.

The comments made in the reports of various colleges indicate that adherence to the standards of the North Central Association is not commonly required. One institution, for example, says that the North Central Association blanks are required to be filled out in full, but that is the only institution which makes any explicit reference to such a practice. Several institutions canvass individual cases through members of the faculty. Several report a probationary system. There are still 12 institutions that have inspectors of their own working in parallel with the inspectors from the State universities. Two institutions report that they keep a careful record of the work done in college by students from the different high schools in their territory and base their acceptance of new students on the records of past students. Evidently there is a good deal of general activity going on in the effort to enlarge the list approved by the North Central Association.

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[1] For a revision of this list, see Bulletin, 1915, No. 7.

### REGISTRATION OF STUDENTS.

The information collected in 1914 with regard to registration of students is much more exact than the information that was available for the report of 1913. Table IV gives the results in two columns showing the number of new students entering institutions in 1913–14 and also the number of students now in attendance in all of the departments above the preparatory department.

TABLE IV.—*New students in 1914; whole number above preparatory department.*

| | 1–50 | 51–100 | 101–150 | 151–200 | 201–250 | 251–300 | 301–350 | 351–400 | 401–450 | 451–500 | 501–550 | 551–600 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Distribution of institutions as to number of matriculants | 1 | 19 | 8 | 14 | 4 | 1 | 1 | ...... | 2 | 3 | 3 | 1 |
| As to present registration | ...... | ...... | 7 | 9 | 8 | 7 | 3 | 7 | 1 | 1 | 1 | 3 |

| | 601–650 | 651–700 | 701–800 | 801–850 | 851–900 | 951–1,000 | 1,001–1,500 | 1,501–2,000 | 2,001–3,000 | 3,001–4,000 | Over 4,000 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Distribution of institutions as to number of matriculants | 0 | 0 | 3 | 0 | 3 | 0 | 3 | 2 | 1 | ...... | ...... |
| As to present registration | 2 | 1 | 0 | 0 | 1 | 1 | 7 | 3 | 4 | 2 | 4 |

Table IV A shows the ratio between matriculants and the total number of students in the institution. The impressive fact which is here presented is that a very large number of the institutions in the association matriculate half or nearly half of their students each year. The problem of maintaining attendance at institutions of the type which thus change their student population to the extent of one-half each year is an important consideration in determining the status of the institutions. Evidently the range of elective opportunities offered in many institutions is so small that students do not find it possible to continue their work profitably for more than two or three years. There can be no doubt that many students are attracted away from college departments to attend technical schools of law, medicine, or engineering. It is fair to raise the question in this connection

whether it would not be better for many institutions to face frankly the fact that their students are likely to leave them after a short period. If such is the case, it might be better to specialize on those lines of instruction which are appropriate to a short course as distinguished from the supposed four-year course which institutions now attempt to administer.

TABLE IV A.—*Ratio of matriculants to total number of students.*[1]

| | 70-61 per cent. | 60-51 per cent. | 50-41 per cent. | 40-31 per cent. | 30-21 per cent. | 20-11 per cent. |
|---|---|---|---|---|---|---|
| Number of institutions having percentage of matriculants | 4 | 10 | 28 | 18 | 6 | 3 |

[1] No report from three institutions.

### SPECIAL AND IRREGULAR STUDENTS.

Table V, showing the percentages of special and irregular students, exhibits a marked improvement over the conditions that were reported in 1913. Thus in 1913 the number of institutions that were able to report that they had no students who had not satisfied the entrance requirements was only 4. At the present time the number of institutions able to make this report is 10. In 1913 only 3 institutions were able to report that they had less than 2 per cent of their students who had not satisfied the entrance requirements. There are 12 such institutions at the present time. The extreme lower end of the table is also much improved, though this is due in part to elimination of institutions from the list. In 1913 there were 3 institutions with more than 30 per cent of their students who had not satisfied the entrance requirements. These institutions have disappeared from the list. There are still 3 institutions with more than 20 per cent of their students who have not satisfied the entrance requirements, but from the movement which is apparent during the year, this number is sure to decrease. The matter was made the subject of special discussion at the last meeting of the association. Doubtless many institutions are finding relief from this difficulty in the fact that they are changing their entrance requirements so as to require less specific work and more of the type of work which can be supplied by the high schools in their territory

TABLE V.—*Number of institutions having various percentages of special students when these are compared with total attendance—Also number of institutions having various percentages of students who have not satisfied all entrance requirements when these are compared with the total attendance.*

| | 0 per cent. | 0.1–1 per cent. | 1.1–2 per cent. | 2.1–3 per cent. | 3.1–4 per cent. | 4.1–5 per cent. | 5.1–6 per cent. | 6.1–7 per cent. | 7.1–8 per cent. | 8.1–9 per cent. | 9.1–10 per cent. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of institutions having a given percentage of special or unclassified students[1] | 13 | 14 | 6 | 8 | 8 | 4 | 2 | 2 | 0 | 1 | 1 |
| Number of institutions having a given percentage of students who have not satisfied the entrance requirements[2] | 10 | 8 | 4 | 5 | 5 | 2 | 3 | 3 | 4 | 2 | 1 |

| | 10.1–11 per cent. | 11.1–12 per cent. | 12.1–13 per cent. | 13.1–14 per cent. | 14.1–15 per cent. | 15.1–16 per cent. | 16.1–17 per cent. | 17.1–18 per cent. | 18.1–19 per cent. | 19.1–20 per cent. | 20.1–25 per cent. | 25.1–30 per cent. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of institutions having a given percentage of special or unclassified students[1] | 0 | 1 | 3 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 | ...... |
| Number of institutions having a given percentage of students who have not satisfied the entrance requirements[2] | 0 | 0 | 2 | 2 | 1 | 2 | 0 | 1 | ...... | ...... | 1 | 2 |

[1] Eight institutions not reporting.

[2] Fourteen institutions not reporting.

## REQUIREMENTS FOR GRADUATION.

Some effort was made in the blanks used this year to find out whether the institutions having different requirements for admission based their calculations on differences with regard to physical education, public speaking, and other irregular courses. It appears that these irregular courses do not account in any large measure for the discrepancies in graduation requirements. Thus the institutions which require 120 semester hours for graduation include 3 which require public speaking and count public speaking as a part of the 120 semester hours. Among the institutions which require a larger number of semester hours for graduation there are some which explain the additional requirements by the fact that they include public speaking. Thus 1 institution which requires 125 semester hours includes public speaking; 2 which require 128 semester hours include public speaking. The table in general, even after deductions are made of these few cases, shows that there are real discrepancies between the requirements for graduation, since there are several institutions requiring as high as 133 semester hours for graduation which do not include public speaking or other extra courses in the list of their requirements.

One item which was not included in the report, but is suggested by a study of these differences in the amount of work required for graduation, is the item of the length of the college year. Many institutions open a week or more earlier in the autumn than other institutions in the list. Probably the length of session ought to be included in any report on the colleges exactly as it is included in the standards for secondary schools in the association.

Even in secondary schools, as appears in the report prepared by Mr. Counts, there is great variation in the amount of work which constitutes a year's course.

TABLE VI.—*Amount of work required for graduation.*[1]

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Semester hours | 116 | 117 | 118 | 119 | 120 | 122 | 124 | 125 | 126 | 128 | 130 | 132 | 133 | 164–176 |
| Institutions | 1 | 1 | 2 | 2 | 33 | 3 | 8 | 2 | 3 | 7 | 1 | 1 | 1 | 1 |
| Term hours | .... | .... | .... | .... | 180 | .... | .... | 188 | .... | .... | 195 | .... | .... | .... |
| Institutions | .... | .... | .... | .... | 1 | .... | .... | 1 | .... | .... | 1 | .... | .... | .... |
| Majors[2] | .... | .... | .... | .... | 36 | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| Institutions | .... | .... | .... | .... | 2 | .... | .... | .... | .... | .... | .... | .... | .... | .... |

[1] One institution reports in wholly different terms, indicating its requirements as 400 to 450 points. The following definition of the term "point" is given: One hour per week of class work not requiring preparation counts one point. Prepared work one hour per week counts two and one-half points.

[2] A major is a 12-week course meeting four or five times a week.

## DEGREES CONFERRED.

Table VII is significant as indicating an increase over the number of degrees granted by institutions in the association in 1913. There were, however, several omissions of reports in this matter last year which rendered the figures incomplete and make it undesirable to compare the present table too closely with that reported in the previous year. An inspection of Table VIII makes it clear that there is a disposition to eliminate all of the variations in degrees and award only the bachelor of arts for all sorts of courses.

TABLE VII.—*Degrees conferred in 1914.*

| | Undergraduate. | | | | | Graduate. | | | |
|---|---|---|---|---|---|---|---|---|---|
| | A. B. | B. S. | B. Ph. | B. L. | Total. | M. A. | M. S. | Ph. D. | Total. |
| Number in Report of Commissioner of Education | 14,154 | 5,253 | 1,281 | 629 | 21,317 | 2,350 | 429 | 509 | 3,288 |
| Number of degrees in institutions on the North Central list | 4,474 | 1,957 | 155 | 113 | 6,699 | 622 | 88 | 103 | 813 |

TABLE VIII.—*Percentage of various degrees conferred.*

| | Percentage of A. B. | Percentage of B. S. | Percentage of Ph. B. | Percentage of B. L. | Percentage of A. M. | Percentage of M. S. | Percentage of Ph. D. |
|---|---|---|---|---|---|---|---|
| North Central Association list | 66.8 | 29.1 | 2.3 | 1.7 | 76.5 | 10.8 | 12.7 |
| Commissioner of Education Report | 66.4 | 24.6 | 6.1 | 2.9 | 71.5 | 13.0 | 15.5 |

## HONORARY DEGREES.

Table IX, showing the number of honorary degrees granted in the institutions in the list, indicates some decrease in the number of such degrees conferred. This is in part due to the fact that fewer special celebrations fall within the period covered by this report.

TABLE IX.—*Number of institutions giving honorary degrees, together with the number of each of the degrees granted.*[1]

| | None. | 1 | 2 | 3 | 4 | 5 | 7 | 8 | 9 | Total. |
|---|---|---|---|---|---|---|---|---|---|---|
| Number of institutions giving in toto number of degrees at top of column | 25 | 14 | [2] 9 | 8 | 7 | 3 | | 2 | 1 | [3] 124 |
| Number giving D. D. to extent indicated at top of column | | [4] 12 | [5] 8 | 6 | 1 | 1 | | | | 55 |
| LL. D | | 16 | 3 | 4 | | | 1 | | | 41 |
| A. M | | 5 | 1 | | 1 | | | | | 11 |
| Sc. D | | 4 | 1 | | | | | | | 6 |
| L. H. D or D. Litt. or D. Eng | | 2 | | | | | | | | 2 |
| Others | | 6 | 1 | | | | | | | 8 |
| Grand total | | | | | | | | | | [3] 124 |

[1] No report from three institutions.
[2] This represents 18 degrees.
[3] One degree not specified.
[4] This represents 12 D. D.'s.
[5] This represents 16 D. D.'s.

TABLE X.

| | D. D. | LL. D. | A. M. | Sc. D. | Literary doctor. | Others. | Total. |
|---|---|---|---|---|---|---|---|
| Number of degrees, Commissioner of Education list | 321 | 265 | 129 | 41 | 84 | 31 | 871 |
| Percentage of total North Central Association list | 44.3 | 33.0 | 8.8 | 4.8 | 1.6 | 6.4 | |
| Percentage of total Commissioner of Education list | 36.9 | 30.4 | 14.8 | 4.7 | 9.6 | 3.6 | |

## GRADUATE STUDY.

The 1914 blanks called for detailed and explicit information regarding students who are doing graduate work in the graduate schools of the country. It was the intention of the committee to follow up the record of any doubtful institution by finding out what credit is awarded in the various graduate departments to these students who are candidates for advanced degrees. The change in the mode of rating institutions for 1915 makes it unnecessary to canvass in this explicit fashion the records of graduate students. The committee will, however, collect during the autumn some statements with regard to those institutions which stand at the lower extremes of the various tables and will be prepared to report to the commission in 1915 on the amount of credit commonly given to graduates of various institutions in graduate schools. In the meantime, the names of the various institutions attended by graduates have some interest as indicating the development of graduate work within the territory of the association itself. The following list of figures shows very little deviation from the report rendered in 1913: Chicago is mentioned 38 times, Harvard 37, Columbia 37, Illinois 21, Yale 17, Wisconsin 16, Princeton 14, Johns Hopkins 13, Cornell 13, Northwestern 9, Michigan 7, Pennsylvania 7, Minnesota 7, Oxford, England, 7, California 6, Kansas 6, Bryn Mawr 6, Ohio State 3, and 29 others from 1 to 3 times.

### PREPARATORY DEPARTMENTS.

Thirty-four institutions in the association still conduct preparatory departments. This year, as last, it has been almost impossible to distinguish in statements with regard to the organization of the institution between the two branches of the institution. Members of the faculty are evidently called upon to serve both in the college and preparatory school. With the present development of public secondary schools there can be very little doubt that preparatory departments are in most cases superfluous. The efforts of various standardizing agencies have been turned in the direction of the elimination of preparatory departments of colleges. The association should take cognizance of the complication which is here presented and should define the type of relationship which it is prepared to tolerate in the institutions included in the list.

### SIZE OF COLLEGE CLASSES.

The information collected for the 1914 report with regard to the size of college classes is much more detailed than that collected in 1913. It was apparent from the figures secured for the 1913 report that there is very great irregularity in this matter. A table corresponding directly to that which was included in the first report is presented (Table XI). The figures reported by the colleges were evidently again in some cases mere estimates, although the blank called explicitly for a statement in this matter. Supplementary tables are given in XII A, B, and C, showing the sizes of the largest and smallest classes in all of the institutions. These tables draw attention very emphatically to the lack of economy which appears in the organization of many very small classes. The difference between lecture and recitation divisions is also made clear and much light is thrown on the differences that obtain in different departments in the conduct of class work. The significance of these figures for the association in general is not obscure. The association has not hesitated to lay down a definite numerical standard for recitation and laboratory classes in college and for all high-school classes. The secondary schools have a right to ask colleges to standardize their practices. The problem of whether a small class should meet as frequently as a large class is a pedagogical and economic problem that should properly lead to a consideration of the standards in the association with reference to both colleges and secondary schools. At all events, it is perfectly obvious from an examination of these tables that the colleges have not regarded themselves as bound by the association's standards or by any of the principles which they have enforced in their treatment of the secondary schools. The tables covering this matter are given in full detail so that a comparison may be made of all of the different practices in different institutions in the association. It would have been possible to combine the figures so as to give the returns in general terms, but it was deemed better to give all of the details so that the practices may be exposed to the fullest view and to the careful consideration which follows upon such a complete exhibition of the facts.

### TABLE XI.

| | Average size of classes. | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| Number of institutions | 1 | 2 | 1 | 1 | 1 | 1 | 4 | 7 | 4 | 3 | 1 |

| | Average size of classes. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 30 | 35 | 36 | 62 |
| Number of institutions | 7 | 10 | 1 | 2 | 2 | 1 | 7 | 1 | 4 | 1 | 1 | 1 |

No report from eight institutions.

### TABLE XII A.—*Smallest divisions.*

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 14 | 15 | No report. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of institutions reporting smallest class containing given number of students | 33 | 12 | 9 | 4 | 7 | .... | 1 | .... | .... | .... | .... | .... | .... | .... | 6 |
| Number of institutions reporting the largest of their five smallest classes containing given number of students | 3 | 9 | 11 | 6 | 12 | 4 | 7 | 5 | 1 | 3 | 1 | 1 | 1 | 1 | 7 |

### TABLE XII B.—*Largest laboratory and recitation divisions.*

| | 5 | 6 | 8 | 9 | 10 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of institutions reporting largest laboratory division at number given | .... | .... | .... | .... | 1 | .... | .... | 1 | 2 | 1 | .... | 2 | 2 | 4 | 2 | 2 | 4 |
| Number of institutions reporting smallest of 5 largest laboratory divisions at number given | 1 | 2 | 2 | 1 | 4 | 2 | 2 | 7 | 5 | .... | 1 | 1 | 8 | 2 | 3 | 3 | 4 |
| Number of institutions reporting largest recitation division | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| Number of institutions reporting smallest of 5 largest recitation divisions | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 | 3 | 2 | 2 | 4 | 5 |

TABLE XII B.—*Largest laboratory and recitation divisions*—Continued.

| | 25 | 26 | 27 | 28 | 30 | 31 | 33 | 34 | 35 | 36 | 37 | 38 | 40 | 41 | 42 | 43 | 44 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of institutions reporting largest laboratory division at number given.. | 7 | 2 | .... | .... | 4 | 3 | .... | 1 | 3 | .... | .... | 1 | 1 | 1 | .... | 1 | 1 |
| Number of institutions reporting smallest of 5 largest laboratory divisions at number given............ | 2 | 1 | 1 | 1 | 2 | .... | 1 | .... | .... | 2 | .... | .... | .... | .... | .... | 1 | 1 |
| Number of institutions reporting largest recitation division................ | 2 | .... | 1 | 1 | 7 | 3 | 1 | .... | 4 | .... | 2 | 2 | 7 | 3 | 2 | .... | 1 |
| Number of institutions reporting smallest of 5 largest recitation divisions........ | 4 | 3 | 2 | 1 | 4 | 3 | 2 | 3 | 1 | 2 | 2 | 5 | 5 | 1 | 1 | 2 | .... |

| | 45 | 46 | 47 | 48 | 49 | 51 | 52 | 53 | 55 | 56 | 58 | 59 | 60 | 63 | 64 | 65 | 67 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of institutions reporting largest laboratory division at number given.. | 2 | 2 | .... | 1 | .... | .... | .... | 1 | 1 | .... | 1 | .... | 1 | 1 | .... | 1 | .... |
| Number of institutions reporting smallest of 5 largest laboratory divisions at number given............ | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| Number of institutions reporting largest recitation division................ | 3 | 2 | .... | 1 | 1 | 3 | 2 | 2 | 1 | 1 | .... | .... | 1 | 1 | .... | 1 | 1 |
| Number of institutions reporting smallest of 5 largest recitation divisions........ | .... | .... | 1 | .... | .... | .... | 1 | 1 | .... | .... | .... | 1 | .... | .... | 1 | .... | .... |

| | 71 | 74 | 75 | 76 | 77 | 82 | 86 | 90 | 93 | 95 | 98 | 100 | 110 | 121 | 139 | 153 | No report. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of institutions reporting largest laboratory division at number given. | .... | 1 | 1 | 1 | .... | .... | .... | .... | .... | 1 | .... | 1 | 1 | .... | 1 | .... | 8 |
| Number of institutions reporting smallest of 5 largest laboratory divisions at number given.......... | 1 | .... | 2 | .... | .... | .... | 1 | .... | .... | .... | .... | .... | .... | .... | .... | .... | 8 |
| Number of institutions reporting largest recitation division................ | .... | .... | 1 | .... | 1 | 1 | .... | 1 | 1 | .... | .... | 1 | .... | 1 | .... | 1 | 8 |
| Number of institutions reporting smallest of 5 largest recitation divisions.... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 | .... | .... | .... | .... | .... | 8 |

TABLE XII C.—*Largest lecture divisions.*

| | 3 | 11 | 12 | 20 | 21 | 23 | 24 | 26 | 27 | 28 | 29 | 30 | 31 | 33 | 34 | 35 | 37 | 38 | 39 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of institutions reporting lecture classes of size given......... | .... | .... | .... | 1 | .... | .... | .... | .... | .... | .... | .... | 5 | 1 | 1 | .... | 1 | 1 | .... | .... |
| Number of institutions reporting smallest of 5 largest lecture divisions of size given. | 1 | 1 | 4 | 2 | 1 | 1 | 5 | 1 | 2 | 2 | 3 | 1 | .... | 1 | 3 | .... | 1 | 1 | 1 |

| | 40 | 41 | 43 | 44 | 45 | 46 | 49 | 50 | 51 | 52 | 55 | 56 | 59 | 60 | 61 | 63 | 64 | 66 | 67 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of institutions reporting lecture classes of size given......... | 1 | 3 | 1 | 1 | 2 | .... | 1 | 2 | 1 | 1 | 1 | 1 | .... | 4 | 1 | 1 | .... | 1 | .... |
| Number of institutions reporting smallest of 5 largest lecture divisions of size given. | .... | .... | 2 | .... | 1 | 1 | 1 | 2 | .... | .... | .... | .... | 1 | .... | 1 | .... | 1 | .... | 1 |

TABLE XII C.—*Largest lecture divisions*—Continued.

| | 70 | 72 | 74 | 75 | 77 | 80 | 81 | 82 | 84 | 88 | 90 | 91 | 95 | 98 | 100 | 113 | 124 | 125 | 133 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of institutions reporting lecture classes of size given | .... | .... | 1 | 1 | 1 | .... | 2 | 1 | 1 | 1 | 2 | 1 | 1 | .... | 2 | 1 | .... | 2 | 1 |
| Number of institutions reporting smallest of 5 largest lecture divisions of size given | 1 | 1 | .... | .... | .... | 1 | .... | 1 | .... | .... | 1 | 1 | .... | 1 | .... | .... | 1 | .... | .... |

| | 134 | 140 | 142 | 149 | 153 | 160 | 179 | 183 | 188 | 200 | 229 | 242 | 293 | 313 | 355 | 365 | 600 | 603 | No report. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of institutions reporting lecture classes of size given | 1 | 1 | 1 | .... | 1 | 1 | .... | 1 | 1 | .... | 1 | 1 | .... | 1 | 1 | 1 | 1 | 1 | 8 |
| Number of institutions reporting smallest of 5 largest lecture divisions of size given | .... | .... | .... | 1 | .... | .... | 1 | .... | .... | 1 | .... | .... | 1 | .... | .... | .... | .... | ... | 18 |

## FACULTY.

Table XIII has been enlarged to indicate the distinction between the larger and the smaller institutions. The figures given in the upper horizontal column show the ratio between students and faculty in all of the institutions included in the list. In the lower horizontal column is presented a supplementary series of figures drawn out of the total number, showing the practices of the largest institutions in the association. This contrast makes it clear that the ratio between faculty and students is not a matter of the size of the institution. It is rather a matter of the general organization and economic conditions of the particular institution.

Again, as pointed out in an earlier paragraph, attention must be drawn to the fact that, in 30 institutions in the list, members of the faculty are called upon to give some attention to the work in the preparatory department. This figure is almost exactly the same as in 1913 and shows that the organization of the colleges in the approved list is very conservative in this matter of preparatory departments.

The effort to discover in detail the preparation of faculty members for their work brings out the fact that there is a good deal of ambiguity in the statement that a member of the faculty has taken graduate work. Very few institutions are prepared to confess that the members of their faculty have not done some graduate work, although it is evident that the amount of this work and its character is difficult to define. Since the adoption by the association of the report of the committee presented on pages 6 and 7, the secretary of the commission has had a number of objections raised by institutions to the setting of the doctor's degree as the standard which must be attained by members of college faculties. It has been repeatedly asserted in letters and in personal conferences that this method of determining definitely whether a member of a faculty has done graduate work is extreme and prejudicial to those who have pursued regular courses in a number of different institutions. Objection is raised in some quarters even to the requirement of the master's degree, and it is explained on a number of the blanks where the report is made that certain members of the faculty have not taken graduate courses; that these are the members of the faculty who give instruction in technical subjects, such as home economics and engineering. In short, it has been almost impossible to get information on this matter of preparation of members of the faculty. Evidently the colleges are not prepared to lay down categorical requirements for their own faculties such as are represented in the definite requirement that all teachers of academic subjects in the secondary schools must have graduated from colleges of the rank of those on the approved list of the association. It might be possible to get some kind of a distribution table from the colleges reporting of the number of years during which various members of the faculty have pursued graduate work. That there should be some clearer definition of preparation of instructors is obvious to one who has attempted to bring together the vague and indefinite reports rendered by colleges on this topic.

TABLE XIII.

| | One faculty member to number of students. | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 22 | 24 | 26 | 28 | 34 |
| Number of institutions............ | 1 | 1 | 5 | 2 | 7 | 4 | 8 | 6 | 6 | 10 | 4 | 4 | 2 | 3 | 2 | 1 | 2 | 1 | 1 |
| | 0 | 0 | 1 | 1 | 1 | 0 | 2 | 2 | 2 | 0 | 2 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 |

No report from two institutions.

TABLE XIII A.

| | None. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 10 | 11 | 12 | 15 | 16 | 18 | 20 | 29 | 68 | No report. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of members of faculty who are not college graduates.... | 38 | 8 | 7 | 5 | 3 | 2 | 1 | .... | 2 | .... | 2 | .... | .... | .... | .... | 1 | 1 | .... | 2 |
| Number of members of faculty with no graduate training.......... | 31 | 6 | 5 | 5 | 1 | 5 | ... | 1 | 1 | 2 | .... | 1 | 1 | 1 | 1 | .... | .... | 1 | 10 |

Table XIV presents the facts with regard to different ranks within the faculty. The apparent large increase in the number of faculty members in 1914 as compared with 1913 is in part explained by the more complete returns in 1914 as contrasted with 1913.

TABLE XIV.

| | Professor. | Associate professor. | Assistant professor. | Instructor. | Lower titles. |
|---|---|---|---|---|---|
| Total number | 2,089 | 781 | 912 | 1,694 | 1,453 |
| Percentage of the whole number | 30 | 11 | 13 | 25 | 21 |

Table XIV A is compiled in view of the standard of the association that there must be a full professor devoting his whole time to the interests of the eight fundamental departments designated by the association.

TABLE XIV A.

| | English. | Modern languages. | Ancient languages. | History. | Social science. | Mathematics. | Physical science. | Biological science. |
|---|---|---|---|---|---|---|---|---|
| Departments which do not have full time of at least 1 professor | 2 | 4 | 5 | 7 | 13 | 5 | 5 | 5 |

TABLE XIV B.

| | Professor. | Associate professor. | Assistant professor. | Instructor. | Lower titles. |
|---|---|---|---|---|---|
| Number of institutions in which titles appear | 72 | 40 | 55 | 67 | 51 |

Table XV shows little change as compared with the corresponding table in the report of 1913. Evidently American colleges have no standards with regard to the titles which they employ. Several institutions give the title of professor with great freedom, with the result that this title has no general significance. When a graduate student who has not yet completed his work for the doctor's degree is awarded the title of professor in one institution and must wait for from four to eight years for a similar title in other institutions in the same list, it will be very difficult to evaluate the title in general. The standard of the association which specifies the number of professors necessary to constitute a minimum faculty is therefore of small significance.

TABLE XV.

| | Percentage. | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1-10 | 11-20 | 21-30 | 31-40 | 41-50 | 51-60 | 61-70 | 71-80 | 81-90 | 91-92 |
| Number of institutions having above percentage of professors | 0 | 0 | 5 | 12 | 13 | 12 | 10 | 11 | 2 | 5 | 2 |
| Number of institutions having above percentage of instructors | 5 | 8 | 19 | 28 | 7 | 3 | 2 | 0 | 0 | 0 | 0 |
| Number of institutions having above percentage of lower rank than instructor | 21 | 11 | 16 | 16 | 5 | 3 | 0 | 0 | 0 | 0 | 0 |

### HOURS OF INSTRUCTION.

The information collected on the blanks of 1914 with regard to hours of instruction was much more detailed than that which was collected in 1913. Distinction was drawn between laboratory instructors and those who have charge of recitations. The results are presented in Table XVI. The diversity of practice in these matters is very striking indeed. If the standards of the association were rigidly enforced, a number of the institutions would be excluded by virtue of the large number of hours assigned to the numbers of their faculties. There can be no doubt at all that the standard referring to hours of work is important in judging of the organization of the institution. At the next meeting of the commission the facts in this respect will be reported with reference to each institution and there can be little doubt that the commission will regard this matter as one of serious importance in determining the position of an institution on the approved list.

**Table XVI.**—*Showing hours of work required of instructors in various institutions.*

| | 6 | 8 | 9 | 10 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of institutions reporting maximum of laboratory hours.. | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 3 | 3 | 0 | 6 | 1 | 6 | 2 | 4 | 1 |
| Number of institutions reporting maximum of recitation and lecture hours........................ | 0 | 0 | 0 | 1 | .... | 1 | 1 | 8 | 7 | 2 | 20 | 1 | 9 | 3 | 2 | 3 |
| Number of institutions reporting average of laboratory hours..... | 1 | 1 | 1 | .... | 1 | 1 | .... | 4 | 2 | 7 | 8 | 4 | 6 | 4 | 4 | 1 |
| Number of institutions reporting average of recitation and lecture hours........................ | 0 | 0 | 0 | 2 | 3 | 2 | 6 | 11 | 11 | 12 | 8 | 1 | 4 | 3 | 2 | .... |

| | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 32 | 34 | 35 | 36 | 38 | 39 | 40 | 45 | No report. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of institutions reporting maximum of laboratory hours. | 4 | 7 | 2 | 4 | 3 | 1 | 4 | 2 | 1 | 1 | 1 | .... | .... | 1 | 1 | 11 |
| Number of institutions reporting maximum of recitation and lecture hours................ | 2 | 1 | 0 | 0 | 1 | .... | .... | .... | .... | .... | .... | .... | 1 | .... | .... | 9 |
| Number of institutions reporting average of laboratory hours.... | 3 | 3 | 3 | .... | 1 | 1 | 4 | .... | 1 | .... | .... | 1 | .... | .... | .... | 10 |
| Number of institutions reporting average of recitation and lecture hours.................... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 7 |

### MATERIAL EQUIPMENT.

The returns on material equipment were much more complete and detailed than in the 1913 report. All of the institutions with endowments less than $200,000, except one, were eliminated from the list. Where the indebtedness of the institution when subtracted from the productive endowment brought the net productive funds of the institution below $200,000, the commission ruled that the institution could not be accepted by the association. There was a question on the blank explicitly asking institutions to explain why this procedure should not be taken in all cases. The answers given are of some interest. Some of the institutions explained that the indebtedness is due to the fact that they have invested funds in dormitories. A number explained that their charters do not permit them to draw upon their funds to meet temporary indebtedness. Some appeal to subscriptions as the offset to indebtedness. In some cases the subscriptions bear interest. In other cases the subscriptions seemed to lack some of the definiteness of this first class and reference was made merely to pledges. One institution had evidently become disadvantageously involved in annuity arrangements. In short, indebtedness appears to arise from a very great variety of causes and appears also in many cases to be a very difficult encumbrance to remove. The amount of indebtedness is set forth in a subsequent table.

Among the items which the committee has come to regard as of large importance in estimating the efficiency of an institution's organization is the item of expenditures for instructorial salaries. Where an institution attempts to carry a large faculty, but evidently expends on the faculty only a very meager sum, it is obvious that the general organization of the institution is at least in danger. Furthermore, in some institutions it appears that the tuition from students contributes a very large portion of the amount which is expended on instructorial salaries. Where this is the case, the probability that the institution can carry on any definite policy of organization is very small, for the simple reason that a falling off in the student body in any given year would immediately result in such a curtailment of the funds of the institution that the faculty itself would have to be reduced. The balance between instructorial and other salaries is also a matter of some interest. Especially was it difficult in a number of cases to get any definite statement of the amount of money which is expended in the preparatory department as distinguished from the college department. The complete analysis of these returns would demand a scrutiny of the accounts of the institutions which the committee did not feel it was qualified to undertake.

The major outstanding fact which appears in the tables on expenditures is that many of the institutions in the association are conducted on a very meager financial basis. Perhaps the simplest way of dealing with the whole situation at the present juncture is to present in tables all of the details that were collected on the blanks. The figures for productive endowment are derived from that part of the blank in which the distinction was definitely drawn between productive endowment and endowment as ordinarily reported. When institutions are called upon, as in this blank, to deduct all funds which are subject to annuity or other liens, it is noticeable that a very great deduction is in some cases made from the sum which is ordinarily reported as productive endowment. There can be no doubt that it is bad policy and bad bookkeeping to include in productive endowment a fund which at the present moment is not producing income for the conduct of the institution. Sooner or later the association will have to take the position that a full financial statement from each institution shall conform to the general standards of the association in its net showing and in the details of the items which are reported.

TABLE XVII.

| Number of institutions: | Productive endowment. | Number of institutions—Con. | Income from State or city. |
|---|---|---|---|
| 1[1] | Below $200,000 | 3 | Below $100,000 |
| 22 | 200,000 to 300,000 | 6 | 100,000 to 200,000 |
| 5 | 300,000 to 400,000 | 3 | 200,000 to 300,000 |
| 5 | 400,000 to 500,000 | 5 | 500,000 to 1,000,000 |
| 12 | 500,000 to 1,000,000 | 2 | 1,000,000 to 2,000,000 |
| 3 | 1,000,000 to 2,000,000 | 1 | 2,000,000 to 5,000,000 |
| 2 | 2,000,000 to 3,000,000 | | |
| 2 | 3,000,000 to 4,000,000 | | |
| 2 | 4,000,000 and over. | | |

TABLE XVII A.

| Number of institutions: | Income from endowment. |
|---|---|
| 1 | No endowment. |
| 2 | $1,000 to $5,000 |
| 5 | 5,000 to 10,000 |
| 26 | 10,000 to 20,000 |
| 7 | 20,000 to 30,000 |
| 7 | 30,000 to 40,000 |
| 4 | 40,000 to 50,000 |
| 2 | $50,000 to $60,000 |
| 3 | 60,000 to 70,000 |
| 2 | 70,000 to 80,000 |
| 1 | 80,000 to 90,000 |
| 4 | 100,000 to 200,000 |
| 1 | 200,000 to 500,000 |
| 2 | 500,000 to 1,000,000 |

Five institutions not reporting.

TABLE XVII B.

| Number of institutions: | Income from tuition. |
|---|---|
| 1 | $1,000 to $5,000 |
| 8 | 5,000 to 10,000 |
| 20 | 10,000 to 20,000 |
| 12 | 20,000 to 30,000 |
| 1 | 30,000 to 40,000 |
| 7 | 40,000 to 50,000 |
| 3 | 50,000 to 60,000 |
| 1 | $70,000 to $80,000 |
| 1 | 80,000 to 90,000 |
| 2 | 90,000 to 100,000 |
| 7 | 100,000 to 200,000 |
| 4 | 200,000 to 500,000 |
| 1 | Over 500,000 |

Three institutions not reporting.

---

[1] Special action of the commission.

### TABLE XVIII.

| Number of institutions: | Aggregate of salaries. |
|---|---|
| 4 | $10,000 to $20,000 |
| 17 | 20,000 to 30,000 |
| 12 | 30,000 to 40,000 |
| 6 | 40,000 to 50,000 |
| 1 | 50,000 to 60,000 |
| 4 | 60,000 to 70,000 |
| 2 | $70,000 to $80,000 |
| 3 | 80,000 to 90,000 |
| 7 | 100,000 to 200,000 |
| 5 | 200,000 to 300,000 |
| 2 | 300,000 to 400,000 |
| 7 | 500,000 and over. |

Two institutions not reporting.

### TABLE XVIII A.

| Number of institutions: | Salaries, preparatory division. |
|---|---|
| 1 | Less than $1,000 |
| 21 | $1,000 to 10,000 |
| 5 | 10,000 to 20,000 |
| 1 | 30,000 to 40,000 |
| 2 | $40,000 to $50,000 |
| 1 | 60,000 to 70,000 |
| 1 | 200,000 to 300,000 |

No preparatory department in 33 institutions.

Seven institutions not reporting.

### TABLE XVIII B.

| Number of institutions: | Salaries, buildings, and grounds. |
|---|---|
| 1 | Less than $1,000 |
| 47 | $1,000 to 10,000 |
| 8 | 10,000 to 20,000 |
| 1 | $20,000 to $30,000 |
| 2 | 50,000 to 60,000 |
| 2 | 100,000 to 200,000 |

Twelve institutions not reporting.

### TABLE XVIII C.

| Number of institutions: | Expenditure, equipment other than books. |
|---|---|
| 4 | Nothing. |
| 4 | Less than $500 |
| 5 | $500 to 1,000 |
| 24 | 1,000 to 5,000 |
| 5 | 5,000 to 10,000 |
| 12 | 10,000 to 20,000 |
| 1 | $20,000 to $30,000 |
| 1 | 40,000 to 50,000 |
| 2 | 50,000 to 60,000 |
| 1 | 60,000 to 70,000 |
| 1 | 80,000 to 90,000 |
| 2 | 100,000 to 200,000 |

Ten institutions not reporting.

### TABLE XVIII D.

| Number of institutions: | Expenditures, books. |
|---|---|
| 1 | Nothing. |
| 3 | $100 to $300 |
| 6 | 300 to 500 |
| 13 | 500 to 800 |
| 1 | 800 to 1,000 |
| 25 | 1,000 to 5,000 |
| 5 | $5,000 to $10,000 |
| 4 | 10,000 to 20,000 |
| 1 | 20,000 to 30,000 |
| 2 | 30,000 to 40,000 |
| 2 | 40,000 to 50,000 |

Eight institutions not reporting.

### TABLE XIX.

| Number of institutions: | Aggregate value of buildings (not dormitories). |
|---|---|
| 4 | Less than $100, 000 |
| 20 | $100, 000 to 200, 000 |
| 15 | 200, 000 to 300, 000 |
| 7 | 300, 000 to 400, 000 |
| 5 | 400, 000 to 500, 000 |
| 2 | 500, 000 to 600, 000 |
| 1 | 600, 000 to 700, 000 |
| 1 | 700, 000 to 800, 000 |
| 1 | $800, 000 to $900, 000 |
| 2 | 900, 000 to 1, 000, 000 |
| 6 | 1, 000, 000 to 2, 000, 000 |
| 4 | 2, 000, 000 to 3, 000, 000 |
| 1 | 3, 000, 000 to 4, 000, 000 |
| 1 | 4, 000, 000 to 5, 000, 000 |
| 1 | 5, 000, 000 to 10, 000, 000 |

One institution not reporting.

### TABLE XIX A.

| Number of institutions: | Value of grounds (not including buildings) |
|---|---|
| 3 | $10, 000 to $20, 000 |
| 5 | 20, 000 to 30, 000 |
| 4 | 30, 000 to 40, 000 |
| 4 | 40, 000 to 50, 000 |
| 5 | 50, 000 to 60, 000 |
| 5 | 60, 000 to 70, 000 |
| 1 | 70, 000 to 80, 000 |
| 2 | $80, 000 to $90, 000 |
| 1 | 90, 000 to 100, 000 |
| 21 | 100, 000 to 200, 000 |
| 11 | 200, 000 to 500, 000 |
| 4 | 500, 000 to 1, 000, 000 |
| 5 | Above 1, 000, 000 |

One institution not reporting.

### TABLE XX.

| Number of institutions: | Percentage of investment in dormitories as compared with total value of other buildings. |
|---|---|
| 2 | Less than 1 |
| 11 | 1 to 10 |
| 17 | 11 to 20 |
| 10 | 21 to 30 |
| 3 | 31 to 40 |
| 4 | 41 to 50 |
| 3 | 51 to 60 |
| 4 | 61 to 70 |
| 3 | 81 to 90 |
| 1 | 91 to 100 |
| 1 | 349 |

Eight institutions with no dormitories or residences.

Five institutions not reporting.

### TABLE XXI.

| Number of institutions: | Value of apparatus and furnishings. |
|---|---|
| 14 | $1, 000 to $10, 000 |
| 13 | 10, 000 to 20, 000 |
| 3 | 20, 000 to 30, 000 |
| 2 | 30, 000 to 40, 000 |
| 4 | 40, 000 to 50, 000 |
| 6 | 50, 000 to 60, 000 |
| 4 | 60, 000 to 70, 000 |
| 2 | $70, 000 to $80, 000 |
| 3 | 80, 000 to 90, 000 |
| 1 | 90, 000 to 100, 000 |
| 9 | 100, 000 to 200, 000 |
| 2 | 200, 000 to 300, 000 |
| 6 | Over 500, 000 |

Four institutions not reporting.

### Table XXI A.

| Number of institutions: | Value of laboratory equipment. |
|---|---|
| 17 | $1,000 to $10,000 |
| 16 | 10,000 to 20,000 |
| 9 | 20,000 to 30,000 |
| 2 | 30,000 to 40,000 |
| 4 | 40,000 to 50,000 |
| 1 | 50,000 to 60,000 |
| 1 | $90,000 to $100,000 |
| 9 | 100,000 to 200,000 |
| 3 | 200,000 to 300,000 |
| 1 | 300,000 to 400,000 |
| 1 | 400,000 to 500,000 |
| 4 | Over 500,000 |

Four institutions not reporting.

### Table XXII.

| Number of institutions: | Number of books. |
|---|---|
| 9 | 1,000 to 10,000 |
| 21 | 10,000 to 20,000 |
| 9 | 20,000 to 30,000 |
| 6 | 30,000 to 40,000 |
| 4 | 40,000 to 50,000 |
| 3 | 50,000 to 60,000 |
| 3 | 60,000 to 70,000 |
| 2 | 70,000 to 80,000 |
| 2 | 80,000 to 90,000 |
| 9 | Miscellaneous. |

Four institutions not reporting.

### Table XXII A.

| Number of institutions: | Value of books. |
|---|---|
| 1 | $1,000 to $5,000 |
| 8 | 5,000 to 10,000 |
| 14 | 10,000 to 20,000 |
| 10 | 20,000 to 30,000 |
| 4 | 30,000 to 40,000 |
| 7 | 40,000 to 50,000 |
| 3 | 50,000 to 60,000 |
| 3 | $60,000 to $70,000 |
| 1 | 70,000 to 80,000 |
| 1 | 80,000 to 90,000 |
| 2 | 90,000 to 100,000 |
| 6 | 100,000 to 200,000 |
| 5 | 200,000 to 500,000 |
| 3 | 500,000 to 800,000 |

Four institutions not reporting.

### Table XXIII.

| Number of institutions: | Debt. |
|---|---|
| 43 | None. |
| 3 | $5,000 to $10,000 |
| 2 | 10,000 to 20,000 |
| 4 | 20,000 to 30,000 |
| 8 | 30,000 to 40,000 |
| 1 | 40,000 to 50,000 |
| 1 | $50,000 to $60,000 |
| 1 | 60,000 to 70,000 |
| 5 | 70,000 to 80,000 |
| 1 | 80,000 to 90,000 |
| 3 | Miscellaneous. |

Nine institutions not reporting.

# PART II.—APPROVED HIGH SCHOOLS OF THE NORTH CENTRAL ASSOCIATION OF COLLEGES AND SECONDARY SCHOOLS.

By GEORGE S. COUNTS.

## INTRODUCTION.

The present investigation is a statistical study based upon 1,000 annual reports sent in by the principals of 1,000 high schools of the North Central Association during the first semester of the school year 1913–14. The scope of the report blank sent to these high schools is made clear by the accompanying reproduction. It should be stated, however, that many of the reports were far from complete. Consequently, no single item of information is complete for the 1,000 schools sending in reports; in each table a statement is made of the exact number of reports at hand for that special item. Furthermore, the reports from the schools of two States, Colorado and Montana, were withdrawn for a time while the work was under way, with the result that these States are not represented in all of the tables. But since the number of schools reporting from these two States is comparatively small in each case, 36 from Colorado and 16 from Montana, the omission is not of great consequence.

The following report blank was sent to the high schools:

City................State..............Special name of high school...............
Superintendent..........................Principal................................
Population of city............Total present enrollment of high school............
Date of this report...........................................................
Date of first accrediting by the North Central Association..........................
Date of organization of high school.............Date of last inspection............

### TEACHING STAFF.

Total number individuals who give instruction in high school.........................................
How many of them are new to the system this year?..................................................
Of the NEW teachers, how many are inexperienced?...................................................
Of the NEW teachers, how many have no special pedagogic preparation?.............................
Of the NEW teachers, how many are not graduated from standard college?...........................
Of the old teachers, how many are not graduated from standard college?.............................
Of the old teachers, how many have no special pedagogical preparation?.............................

### DISTRIBUTION OF WORK.

Number of periods taught by superintendent..........principal..........
*Number of periods in assembly room, superintendent..........principal..........
Number of teachers who teach the following number of periods:
Men: 1.......... 2.......... 3.......... 4.......... 5.......... 6.......... 7..........
Women: 1.......... 2.......... 3.......... 4.......... 5.......... 6.......... 7..........
*Number of teachers who, in addition to teaching, supervise study:
*Men: 1.......... 2.......... 3.......... 4..........
*Women: 1.......... 2.......... 3.......... 4..........

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*Items marked with the * are not required for approval.

### LENGTH OF SCHOOL YEAR.

Date of opening of school year..........date of closing..........
Number of weeks of five days each during which school is actually in session..............................
Hour of opening..........of closing..........
Number recitations (including laboratory periods) in daily program..............................
Actual number of 60-minute hours in each full day, excluding all recess periods..............................
Number minutes in the clear in each recitation period..............................
Number minutes in the clear in each laboratory period..............................
Number minutes in the clear in each manual training period..............................
Number minutes in the clear in each agriculture period..............................
Number minutes in the clear in each cooking period..............................
Number minutes in the clear in each sewing period..............................
Number minutes in the clear in each commercial period..............................
Mention all exceptions to the foregoing statement of the length of recitation period..............................

### GRADUATION.

Number "units" required for graduation in your high school..............................
What grade is required for passing?..............................
For recommendation to college?..............................
Number graduated last year..............................

### SIZE OF CLASSES.

Name subjects in which there are classes of over 30. (If there is more than one section in any subject, note the number of sections in that subject having more than 30 pupils.)..............................
..............................
*Number of classes or sections with 1 to 10 pupils..............................
*Number of classes or sections with 11 to 20 pupils..............................
*Number of classes or sections with 21 to 30 pupils..............................
*Number of classes or sections with 31 to 40 pupils..............................
*Number of classes or sections with 41 to 50 pupils..............................

*Items marked with the * are not required for approval.

### HIGH-SCHOOL ENROLLMENT.

Total enrollment December 1, this year.......... This date..........
*Total enrollment close of last year.......... Opening of this..........
*Number of students now in fourth year..........; third year..........; second year..........; first year..........
*Number of students classified as "special" or "irregular"..............................
*Number of present senior class who, including this year, have attended any high school 6 years.......... 5 years..........; 4 years..........; 3 years..........; only 2 years..........; only 1 year..........
*Number belonging to this class four years ago who dropped out of high school during first year..........; second year..........; third year..........; fourth year..........
*Number of postgraduates.......... Number in city eighth grade..........
*Number of students in the high school from outside the school corporation..........

*Not required for approval.

### *INFORMATION REGARDING LAST GRADUATING CLASS.

*This section is not required for approval.

*Number of pupils who graduated last year with more than 14 units:

15.......... 15½.......... 16.......... 16½..........
17.......... 17½.......... 18.......... 18½..........
19.......... 19½.......... 20..........

*Number of last year's class who have gone to—

| | *Boys.* | *Girls.* | | *Boys.* | *Girls.* |
|---|---|---|---|---|---|
| College.......... | .......... | .......... | Medicine.......... | .......... | .......... |
| Commercial school. | .......... | .......... | Dentistry.......... | .......... | .......... |
| Trades.......... | .......... | .......... | Engineering.......... | .......... | .......... |
| Farming.......... | .......... | .......... | Pharmacy.......... | .......... | .......... |
| Normal school..... | .......... | .......... | Law.......... | .......... | .......... |
| Business.......... | .......... | .......... | Domestic economy. | .......... | .......... |
| Remain at home... | .......... | .......... | Agriculture.......... | .......... | .......... |
| Other occupations.. | .......... | .......... | Unknown.......... | .......... | .......... |

(See other side. Standards in full on other side.)

### MATERIAL EQUIPMENT.

Number rooms used exclusively for laboratory purposes..........
Number rooms used exclusively for recitation purposes..........
Number rooms used exclusively for assembly purposes..........
Number rooms used exclusively for manual training purposes..........
Number rooms used exclusively for domestic science purposes..........
Number rooms that are overcrowded..........
Do you have recitations in study room?..........
Number rooms used for more than one purpose..........
Value of equipment in: Physics.......... Chemistry.......... Botany.......... Zoology..........
Agriculture.......... Sewing.......... Cooking.......... Commercial course..........
Number dollars expended in equipment annually..........

### COURSE OF STUDY.

Do students elect by subject?.......... or by "courses"?..........
Number of units or half units of work actually being given this year in each subject:

English..........
Physics..........
Cooking..........
Commercial course..........
Agriculture..........
Manual training..........
Physical geography..........
Physiology..........

German..........
French..........
History..........
Civics..........
Chemistry..........
Botany..........
Zoology..........
Education..........

Domestic science..........
Music..........
Latin..........
Algebra..........
Geometry..........
Drawing..........
Sewing..........
Normal..........

Name other subjects..........

### LIBRARY.

Does the city maintain a public library?..........
How far is it from school?..........Number of volumes..........
Number of volumes in high-school library distributed by departments:

English..........
Botany..........
Sewing..........
Zoology..........
Manual training..........
Physiology..........
Mathematics..........

History..........
Chemistry..........
Cooking..........
Latin..........
Education..........
French..........
Drawing and art..........

Physics..........
Agriculture..........
Physical geography..........
German..........
Fiction..........
Civics..........
Commercial..........

Government reports: United States.......... State..........
Number encyclopedias for high school..........
Total number volumes of all kinds added last year..........
Number dollars expended last year for books..........

### *STANDINGS.

*This section is optional.

*What was the average in all subjects of the last year's graduating class?..........
*What was the average in all subjects of the highest ranking student in your last year's graduating class?..........
*Same for the lowest ranking student actually graduated?..........
*Of those who went to college, what per cent stood in the highest third of the class (highest third meaning highest numerical third after class is ranked from best to worst) in your school?..........
*Do you receive information from the colleges in regard to the standing of your graduates?..........

### * SALARIES OF TEACHERS.

* This section is optional.

Please fill out the following table, showing the range of salaries, including in the figures the principal but marking his salary so that it can be distinguished from the others.

* Number having—

300 to 399.......... 400 to 499.......... 500 to 599.......... 600 to 699..........
700 to 799.......... 800 to 899.......... 900 to 999.......... 1,000 to 1,099..........
1,100 to 1,199.......... 1,200 to 1,299.......... 1,300 to 1,399.......... 1,400 to 1,499..........
1,500 to 1,599.......... 1,600 to 1,699.......... 1,700 to 1,799.......... 1,800 to 1,899..........
1,900 to 1,999.......... 2,000 to 2,099.......... 2,100 to 2,199.......... 2,200 to 2,299..........
2,300 to 2,399.......... 2,400 to 2,499.......... 2,500 to 2,599.......... 2,600 to 2,699..........
2,700 to 2,799.......... 2,800 to 2,899.......... 2,900 to 2,999.......... 3,000 to 3,099..........
3,100 to 3,199.......... 3,200 to 3,299.......... 3,300 to 3,399.......... 3,400 to 3,499..........
Above..........

### STANDARDS OF THE NORTH CENTRAL ASSOCIATION.

The aim of the North Central Association of Colleges and Secondary Schools is, first, to bring about a better acquaintance, a keener sympathy, and a heartier cooperation between the colleges and secondary schools of this territory; secondly, to consider common educational problems and to devise best ways and means of solving them; and thirdly, to promote the physical, intellectual, and moral well-being of students by urging proper sanitary conditions of school buildings, adequate library and laboratory facilities, and higher standards of scholarship and of remuneration of teachers. The association is a voluntary organization consisting of representatives of both secondary schools and colleges, is devoted solely to the highest welfare of the boys and girls of this territory, and bespeaks the cordial and sympathetic support of all schoolmen.

The following constitute the standards for accrediting secondary schools for the present year:

1. No school shall be accredited which does not require 15 units, as defined by the association, for graduation. More than 20 periods per week should be discouraged.

(A unit course of study in a secondary school is defined as a course covering an academic year that shall include in the aggregate not less than the equivalent of 120 sixty-minute hours of classroom work, two hours of manual training or laboratory work being equivalent to one hour of classroom work.)

2. The minimum scholastic attainment of all secondary school teachers of academic subjects shall be equivalent to graduation from a college belonging to the North Central Association of Colleges and Secondary Schools. It is strongly advised that this attainment include, or be supplemented by, special study of the content and the pedagogy of the subject taught. Such requirements shall not be construed as retroactive.

3. The number of daily periods of classroom instruction given by any teacher should not exceed five, each to extend over at least 40 minutes in the clear. The board of inspectors will reject all schools having more than six recitation periods per day for any teacher.

4. The laboratory and library facilities shall be adequate to the needs of instruction in the subjects taught, as outlined by the association.

5. The location and construction of the buildings, the lighting, heating, and ventilation of the rooms, the nature of the lavatories, corridors, closets, water supply, school furniture, apparatus, and methods of cleaning shall be such as to insure hygienic conditions for both pupils and teachers.

6. The efficiency of instruction, the acquired habits of thought and study, the general intellectual and moral tone of a school are paramount factors, and therefore only schools which rank well in these particulars, as evidenced by rigid, thoroughgoing, sympathetic inspection, shall be considered eligible for the list.

7. The association will decline to consider any school whose teaching force consists of fewer than four teachers of academic subjects, exclusive of the superintendent. The association recommends the introduction of the so-called vocational subjects, such as agriculture, manual training, household arts, and commercial subjects, into schools where local conditions render such introduction feasible, but the inspectors will hold that a sufficient number of qualified teachers must be added to provide adequately for such instruction.

8. No school shall be considered unless the regular annual blank furnished for the purpose shall have been filled out and placed on file with the inspector. In case of schools having 12 or more teachers a complete report on teachers once in three years will be sufficient; but full data relative to changes should be presented annually.

9. All schools whose records show an excessive number of pupils per teacher, as based on average number belonging, even though they may technically meet all other requirements, are rejected. The association recognizes 30 as maximum.

10. The time for which schools are accredited shall be limited to one year, dating from the time of the adoption of the list by the association.

11. The agent of communication between the accredited schools and the secretary of the commission for the purpose of distributing, collecting, and filing the annual reports of such schools and for such other purposes as the association may direct, is as follows: (*a*) In States having such an official, the inspector of schools appointed by the State university. (*b*) In other States the inspector of schools appointed by State authority, or, if there be no such official, such person or persons as the secretary of the commission may select.

The association is very conservative, believing that such action will eventually work to the highest interests of the schools and the association. It aims to accredit only those schools which possess organization, teaching force, standards of scholarship, equipment, esprit de corps, etc., of such character as will unhesitatingly commend them to any educator, college, or university in the north central territory. Wherever there is reasonable doubt concerning the standing of a school, the association will accept that doubt as ground sufficient to justify rejection.

The method used in making the analysis of these reports has, in a large measure, been taken over from a similar study made by Jessup and Coffman last year. Jessup and Coffman analyzed their material on the basis of State and population, with especial reference to the latter. In both reports schools are grouped according to the States and also according to the size of the city in which they are located. The cities are divided into seven classes, those with populations of 2,500 and under, those with populations from 2,501 to 5,000, from 5,001 to 7,500, from 7,501 to 10,000, from 10,001 to 15,000, from 15,001 to 50,000, and those with populations above 50,000. In addition to the classification adopted by Jessup and Coffman this report presents a classification of schools according to enrollment in some of the tables, since it seemed that enrollment would furnish a more significant basis of analysis for certain items. The schools are divided into six groups: Those with 100 students or less, those with from 101 to 200 students, from 201 to 300, from 301 to 500, from 501 to 1,000, and those with more than 1,000 students.

The purpose of the study is to present a body of material to those interested in secondary education which will enable them to get some idea of the nature and scope of the work now being done by a selected group of secondary schools in the Middle West. It is hoped that the information here set forth will be of practical value to those in control of the high schools in the territory covered by this report. One of the chief values of the presentation of these facts in the form of tables is that it makes it possible for school authorities to compare the organization, material equipment, course of study, etc., of their own schools with a group of selected schools. If, for instance, the principal of a high school finds out by reference to these tables that his high school does not have as good material equipment as the majority of the high schools of the same size, he has a strong argument to put before the school board in recommending appropriations for material equipment.

For purposes of ready reference medians have been worked out in many cases. In a series of variants the median is the middle one. For example, suppose we have 15 schools reporting on some particular item. The schools are ranked from lowest to highest. The median is the eighth school, counting from either the top or the bottom of the series. Thus the median is a measure of central tendency lying midway between the two extremes. Now, if it should be found by the principal of a school that the value of the material equipment of his school is much below the median, he should at least give the matter his attention. In this way the standards of the schools will gradually be raised.

At the time that the information summarized in this report was collected from the schools additional information was collected from individual teachers regarding their training and work. This body of material is so bulky that it will require more time to complete a report in regard to teachers. The general facts regarding teachers are presented in the summary form in which this matter was called for in the principal's report.

TABLE I.—*Population of cities—School enrollment.*

| | Under 2,500 | 2,501-5,000 | 5,001-7,500 | 7,501-10,000 | 10,001-15,000 | 15,001-50,000 | 50,001 and over. | Total. |
|---|---|---|---|---|---|---|---|---|
| Colorado | 8 | 11 | 4 | 4 | 1 | 3 | 5 | 36 |
| Illinois | 21 | 33 | 18 | 12 | 11 | 25 | 26 | 146 |
| Indiana | 6 | 12 | 9 | 12 | 5 | 11 | 8 | 63 |
| Iowa | 13 | 26 | 6 | 2 | 5 | 12 | 3 | 67 |
| Kansas | 27 | 21 | 4 | 9 | 6 | 6 | 3 | 76 |
| Michigan | 21 | 22 | 14 | 8 | 12 | 10 | 12 | 99 |
| Minnesota | 22 | 17 | 10 | 8 | 4 | 1 | 11 | 73 |
| Missouri | 5 | 11 | 12 | 7 | 1 | 2 | 14 | 52 |
| Montana | 1 | 6 | 3 | 1 | 4 | 1 | 0 | 16 |
| Nebraska | 26 | 11 | 6 | 4 | 2 | 4 | 2 | 55 |
| North Dakota | 17 | 5 | 3 | 0 | 3 | 0 | 0 | 28 |
| Ohio | 16 | 32 | 27 | 19 | 13 | 17 | 34 | 168 |
| Oklahoma | 2 | 6 | 1 | 4 | 6 | 2 | 1 | 22 |
| South Dakota | 5 | 7 | 3 | 1 | 3 | 0 | 0 | 19 |
| Wisconsin | 17 | 29 | 14 | 4 | 4 | 17 | 5 | 90 |
| Total | 207 | 249 | 134 | 95 | 80 | 111 | 124 | 1,000 |

| | 1-100 | 101-200 | 201-300 | 301-500 | 501-1,000 | 1,001 and over. | Total. |
|---|---|---|---|---|---|---|---|
| Colorado | 4 | 12 | 8 | 6 | 4 | 2 | 36 |
| Illinois | 21 | 48 | 22 | 21 | 20 | 12 | 144 |
| Indiana | 2 | 21 | 17 | 14 | 6 | 3 | 63 |
| Iowa | 1 | 28 | 12 | 16 | 5 | 2 | 64 |
| Kansas | 4 | 36 | 16 | 15 | 1 | 3 | 75 |
| Michigan | 11 | 30 | 26 | 17 | 11 | 3 | 98 |
| Minnesota | 5 | 32 | 17 | 10 | 1 | 6 | 71 |
| Missouri | 10 | 21 | 6 | 5 | 3 | 6 | 51 |
| Montana | 3 | 5 | 3 | 3 | 2 | 0 | 16 |
| Nebraska | 9 | 28 | 7 | 6 | 0 | 1 | 51 |
| North Dakota | 12 | 14 | 0 | 2 | 0 | 0 | 28 |
| Ohio | 16 | 48 | 33 | 29 | 20 | 9 | 155 |
| Oklahoma | 1 | 9 | 3 | 5 | 0 | 0 | 18 |
| South Dakota | 2 | 11 | 3 | 2 | 0 | 0 | 18 |
| Wisconsin | 3 | 44 | 18 | 12 | 9 | 3 | 89 |
| Total | 104 | 386 | 191 | 163 | 83 | 50 | 977 |

## LOCATION OF SCHOOLS.

Table I is a somewhat general table giving the size and location of the 1,000 high schools sending in the reports upon which this investigation is based. Beginning at the top of the table, we read that 8 of the Colorado schools are situated in cities with a population of 2,500 or less, 11 in cities with populations ranging from 2,501 to 5,000, etc., and that, in all, Colorado is represented by 36 schools. Reading further, we see that of these 36 schools 4 have enrollments between 1 and 100, 12 between 101 and 200, and so on.

It is to be noted that 15 States are represented, and the number of schools in the several States ranges from 16 in Montana to 158 in Ohio. In a general way the number of schools varies with the population and age of the State. For the entire association the largest number of schools is found in cities of the second size. This also holds for most of the States, but it does not hold for Kansas, Minnesota, Nebraska, and North Dakota, in which States the city with a population of 2,500 or less is most frequent, nor for Missouri, where the city of the third size predominates.

As regards enrollment, 386 out of a total of 977 have enrollments varying from 101 to 200, and this size of school is also most frequent in every one of the States. This does not mean that schools of this size are most frequent in the north central territory, but merely in the association, for a great many of the smaller schools are unable or unwilling to meet the requirements for admission to membership in the association. It is the exceptional school having an enrollment of 100 or less that becomes a member of the association.

The discrepancy between the totals when the schools are arranged with reference to population and when they are arranged on the basis of enrollment is due to the fact that, of the 1,000 schools reporting, only 977 reported enrollment, while the population could be obtained in every case by consulting the United States census reports.

TABLE II.

| Total enrollment. | Under 2,500 | 2,501–5,000 | 5,001–7,500 | 7,501–10,000 | 10,001–15,000 | 15,001–50,000 | 50,001 and over. | Total. |
|---|---|---|---|---|---|---|---|---|
| Under 50 | 2 | ........ | 2 | 5 | 1 | 1 | 5 | 16 |
| 51-75 | 13 | 5 | 1 | 0 | 1 | 2 | 5 | 27 |
| 76-100 | 32 | 9 | 2 | 4 | 2 | 1 | 3 | 53 |
| 101-125 | 49 | 29 | 3 | 2 | 0 | 1 | 2 | 86 |
| 126-150 | 45 | 38 | 14 | 3 | 1 | 2 | 2 | 105 |
| 151-175 | 32 | 43 | 14 | 0 | 1 | 1 | 2 | 98 |
| 176-200 | 9 | 43 | 16 | 6 | 3 | 2 | 1 | 80 |
| 201-225 | 3 | 26 | 19 | 4 | 5 | 2 | 3 | 62 |
| 226-250 | 3 | 14 | 10 | 11 | 5 | 0 | 0 | 43 |
| 251-275 | 1 | 7 | 14 | 10 | 2 | 0 | 2 | 36 |
| 276-300 | 1 | 4 | 9 | 13 | 5 | 2 | 1 | 35 |
| 301-350 | 2 | 8 | 10 | 13 | 15 | 11 | 1 | 60 |
| 351-400 | 1 | 3 | 3 | 8 | 10 | 5 | 4 | 34 |
| 401-450 | 1 | ........ | 0 | 7 | 9 | 18 | 4 | 39 |
| 451-500 | 1 | ........ | 1 | 1 | 9 | 11 | 1 | 24 |
| 501-550 | ........ | ........ | 1 | 0 | 1 | 5 | 4 | 11 |
| 551-600 | ........ | ........ | ........ | 1 | 2 | 6 | 6 | 15 |
| 601-650 | ........ | ........ | ........ | ........ | 0 | 7 | 3 | 10 |
| 651-700 | ........ | ........ | ........ | ........ | 1 | 2 | 3 | 6 |
| 701-750 | ........ | ........ | ........ | ........ | ........ | 3 | 6 | 9 |
| 751-800 | ........ | ........ | ........ | ........ | ........ | 5 | 4 | 9 |
| 801-850 | ........ | ........ | ........ | ........ | ........ | 1 | 1 | 2 |
| 851-900 | ........ | ........ | ........ | ........ | ........ | 2 | 3 | 5 |
| 901-950 | ........ | ........ | ........ | ........ | ........ | 2 | 4 | 6 |
| 951-1,000 | ........ | ........ | ........ | ........ | ........ | 1 | 3 | 4 |
| 1,001-1,050 | ........ | ........ | ........ | ........ | ........ | 1 | 2 | 3 |
| 1,051-1,100 | ........ | ........ | ........ | ........ | ........ | 2 | 3 | 5 |
| 1,101-1,150 | ........ | ........ | ........ | ........ | ........ | 0 | 3 | 3 |
| 1,151-1,200 | ........ | ........ | ........ | ........ | ........ | 2 | 2 | 4 |
| 1,201-1,250 | ........ | ........ | ........ | ........ | ........ | 0 | 7 | 7 |
| 1,251-1,300 | ........ | ........ | ........ | ........ | ........ | 0 | 1 | 1 |
| 1,301-1,350 | ........ | ........ | ........ | ........ | ........ | 1 | 1 | 2 |
| 1,351-1,400 | ........ | ........ | ........ | ........ | ........ | 0 | 2 | 2 |
| 1,451-1,500 | ........ | ........ | ........ | ........ | ........ | 1 | 3 | 4 |
| 1,501-1,550 | ........ | ........ | ........ | ........ | ........ | ........ | 4 | 4 |
| 1,551-1,600 | ........ | ........ | ........ | ........ | ........ | ........ | 2 | 2 |
| 1,601-1,700 | ........ | ........ | ........ | ........ | ........ | ........ | 3 | 3 |
| 1,701-1,800 | ........ | ........ | ........ | ........ | ........ | ........ | 3 | 3 |
| 1,801-1,900 | ........ | ........ | ........ | ........ | ........ | ........ | 1 | 1 |
| 2,001-2,100 | ........ | ........ | ........ | ........ | ........ | ........ | 2 | 2 |
| 2,100-2,200 | ........ | ........ | ........ | ........ | ........ | ........ | 1 | 1 |
| 2,701-2,800 | ........ | ........ | ........ | ........ | ........ | ........ | 1 | 1 |
| Total number of schools | 195 | 229 | 119 | 88 | 73 | 100 | 114 | 918 |
| Total enrollment | 28,395 | 40,309 | 25,952 | 23,404 | 24,338 | 52,082 | 94,213 | 288,693 |
| Median | 126 | 176 | 210 | 273 | 335 | 459 | 742 | 200 |
| Quartile deviation | 26½ | 36 | 51 | 60½ | 88½ | 143 | 427 | ........ |

## TABLE II—Continued.

| Total enrollment. | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. |
|---|---|---|---|---|---|---|---|
| Under 50 | 2 | 1 | | | 2 | | 3 |
| 51-75 | 5 | 0 | | 2 | 4 | 2 | 4 |
| 76-100 | 12 | 1 | 1 | 2 | 6 | 3 | 3 |
| 101-125 | 13 | 3 | 4 | 10 | 7 | 6 | 8 |
| 126-150 | 13 | 3 | 10 | 10 | 7 | 10 | 4 |
| 151-175 | 12 | 5 | 6 | 7 | 9 | 9 | 3 |
| 176-200 | 8 | 8 | 9 | 8 | 7 | 7 | 6 |
| 201-225 | 7 | 6 | 4 | 5 | 9 | 8 | 3 |
| 226-250 | 4 | 5 | 1 | 6 | 5 | 3 | 0 |
| 251-275 | 4 | 3 | 4 | 3 | 6 | 2 | 2 |
| 276-300 | 5 | 2 | 2 | 3 | 5 | 3 | 1 |
| 301-350 | 7 | 3 | 11 | 5 | 6 | 5 | 3 |
| 351-400 | 8 | 4 | 1 | 6 | 5 | 3 | 0 |
| 401-450 | 6 | 5 | 3 | 2 | 4 | 1 | 1 |
| 451-500 | 2 | 2 | 2 | 2 | 1 | 1 | 1 |
| 501-550 | 6 | 1 | 1 | 0 | 0 | 0 | 0 |
| 551-600 | 4 | 1 | 0 | 1 | 0 | 0 | 1 |
| 601-650 | 3 | 1 | 2 | 0 | 2 | 0 | 0 |
| 651-700 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 701-750 | 2 | 0 | 0 | 0 | 1 | 1 | 1 |
| 751-800 | 4 | 1 | 1 | 0 | 1 | 0 | 0 |
| 801-850 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| 851-900 | 2 | 0 | 0 | 0 | 0 | 0 | 1 |
| 901-950 | 1 | 1 | 0 | 0 | 3 | 0 | 0 |
| 951-1,000 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| 1,001-1,050 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1,051-1,100 | 2 | 0 | 1 | 1 | 0 | 0 | 0 |
| 1,101-1,150 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 1,151-1,200 | 2 | 1 | 0 | 0 | 0 | 0 | 0 |
| 1,201-1,250 | 0 | 0 | 1 | 1 | 1 | 1 | 1 |
| 1,251-1,300 | 0 | 0 | | 0 | 0 | 0 | 1 |
| 1,301-1,350 | 0 | 0 | | 1 | 0 | 1 | 0 |
| 1,351-1,400 | 0 | 0 | | | 1 | 0 | 0 |
| 1,451-1,500 | 2 | 0 | | | 0 | 1 | 1 |
| 1,501-1,550 | 2 | 0 | | | 0 | 2 | 0 |
| 1,551-1,600 | 0 | 0 | | | 0 | 0 | 1 |
| 1,601-1,700 | 0 | 0 | | | 0 | 1 | 1 |
| 1,701-1,800 | 1 | 1 | | | 0 | 0 | 1 |
| 1,801-1,900 | 0 | 0 | | | 0 | 0 | |
| 2,001-2,100 | 1 | 0 | | | 0 | 1 | |
| 2,100-2,200 | | 1 | | | 0 | | |
| 2,701-2,800 | | | | | 1 | | |
| Total number of schools | 141 | 61 | 65 | 75 | 96 | 71 | 51 |
| Total enrollment | 51,977 | 23,203 | 19,530 | 19,700 | 31,243 | 24,411 | 18,378 |
| Median | 220 | 243 | 216 | 190 | 217 | 195 | 177 |

| Total enrollment. | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. | Total. |
|---|---|---|---|---|---|---|---|
| Under 50 | 3 | | 4 | | 1 | | 16 |
| 51-75 | 3 | 4 | 3 | | 0 | | 27 |
| 76-100 | 4 | 9 | 7 | 1 | 1 | 3 | 53 |
| 101-125 | 10 | 4 | 9 | 1 | 3 | 8 | 86 |
| 126-150 | 6 | 5 | 16 | 2 | 4 | 15 | 105 |
| 151-175 | 8 | 0 | 13 | 3 | 2 | 16 | 93 |
| 176-200 | 3 | 4 | 10 | 3 | 2 | 5 | 80 |
| 201-225 | 4 | 0 | 10 | 1 | 1 | 4 | 62 |
| 226-250 | 2 | 0 | 12 | 0 | 1 | 4 | 43 |
| 251-275 | 0 | 0 | 6 | 1 | 0 | 5 | 36 |
| 276-300 | 1 | 0 | 6 | 1 | 1 | 5 | 35 |
| 301-350 | 3 | 0 | 10 | 2 | 1 | 4 | 60 |
| 351-400 | 1 | 0 | 5 | 0 | 0 | 1 | 34 |
| 401-450 | 2 | 1 | 7 | 1 | 0 | 6 | 39 |
| 451-500 | 0 | 1 | 8 | 2 | 1 | 1 | 24 |
| 501-550 | 0 | | 3 | | | 0 | 11 |
| 551-600 | 0 | | 6 | | | 2 | 15 |
| 601-650 | 0 | | 1 | | | 1 | 10 |
| 651-700 | 0 | | 4 | | | 1 | 6 |
| 701-750 | 0 | | 2 | | | 2 | 9 |
| 751-800 | 0 | | 1 | | | 1 | 9 |
| 801-850 | 0 | | 0 | | | 0 | 2 |
| 851-900 | 0 | | 1 | | | 1 | 5 |
| 901-950 | 0 | | 1 | | | 0 | 6 |
| 951-1,000 | 0 | | 1 | | | 1 | 4 |
| 1,001-1,050 | 0 | | 0 | | | 2 | 3 |
| 1,051-1,100 | 0 | | 1 | | | 0 | 5 |

TABLE II—Continued.

| Total enrollment. | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. | Total. |
|---|---|---|---|---|---|---|---|
| 1,101-1,150 | 0 | | 1 | | | 1 | 3 |
| 1,151-1,200 | 1 | | 0 | | | | 4 |
| 1,201-1,250 | | | 2 | | | | 7 |
| 1,251-1,300 | | | 0 | | | | 1 |
| 1,301-1,350 | | | 0 | | | | 2 |
| 1,351-1,400 | | | 1 | | | | 2 |
| 1,451-1,500 | | | 0 | | | | 4 |
| 1,501-1,550 | | | 0 | | | | 4 |
| 1,551-1,600 | | | 1 | | | | 2 |
| 1,601-1,700 | | | 1 | | | | 8 |
| 1,701-1,800 | | | 0 | | | | 8 |
| 1,801-1,900 | | | 1 | | | | 1 |
| 2,001-2,100 | | | 0 | | | | 2 |
| 2,100-2,200 | | | 0 | | | | 1 |
| 2,701-2,800 | | | 0 | | | | 1 |
| Total number of schools | 51 | 28 | 154 | 18 | 18 | 89 | 918 |
| Total enrollment | 9,452 | 3,898 | 53,046 | 4,375 | 3,313 | 25,967 | 288,698 |
| Median | 148 | 106 | 235 | 192 | 156 | 188 | 200 |

## ENROLLMENT.

In Table II the distribution of schools according to enrollment is shown more in detail. The table should be read as follows: In cities having a population of 2,500 or less there are 2 schools out of the 195 represented with an enrollment of 50 or less, 13 with enrollments ranging from 51 to 75, etc.; in cities of the second size no school of the 229 sending in reports has an enrollment of 50 or less, 5 have enrollments falling between 51 and 75, etc. For the States the table is read in the same way.

A glance at the table shows that there is some relation between the size of the school and the size of the city in which the school is located. The median enrollment ranges from 126 for schools situated in cities of less than 2,500 population to 742 in cities having populations of over 50,000; but it is an interesting fact, very clearly brought out in the table, that, while the large schools are, with hardly an exception, found in the large cities, the small schools are by no means confined to the small cities. The range of variation in size of schools increases with the size of the cities. This is plainly shown by the quartile deviation which increases steadily from 26½ for schools in towns of less than 2,500 population to 427 for the schools located in towns of the largest size. The quartile deviation is a measure of the variation in a series of items. The term quartile is used to refer to the points in the series, which divide the series into quarters. There are therefore three quartiles—first, second, and third; but the second is the median, since it is the division point of the second and third quarters, which is at the middle point of the series. The quartile deviation is one-half the difference between the first and third quartiles. The matter will be better understood by reference to the table. For example, take the group of schools located in cities of 2,500 inhabitants and under.

There are 195 schools in the group. By a process of division the first quartile is found to be the forty-ninth school; the second quartile, or median, the ninety-eighth school; and the third quartile, the one hundred and forty-seventh school, when the schools are ranked from lowest to highest according to enrollment. By counting down from the top of the column we find that the forty-ninth school is the second school of the 49 schools having enrollments from 101 to 125. By computation the enrollment of the school is found to be 101. Following the same method the median enrollment is found to be 126 and the third quartile 154. Subtracting 101 from 154 gives a difference of 53, and one-half of 53 is 26½, which is the quartile deviation for the group of schools in question.

This relation between the range of school enrollments and the size of cities is shown graphically in Figure 1. The limits of each of the horizontal lines represent the first and third quartiles, and the point near the middle of the line the median of each group of schools when grouped according to the size of city in which they are located. In other words, each line represents the range of the middle 50 per cent of the schools situated in each size of city.

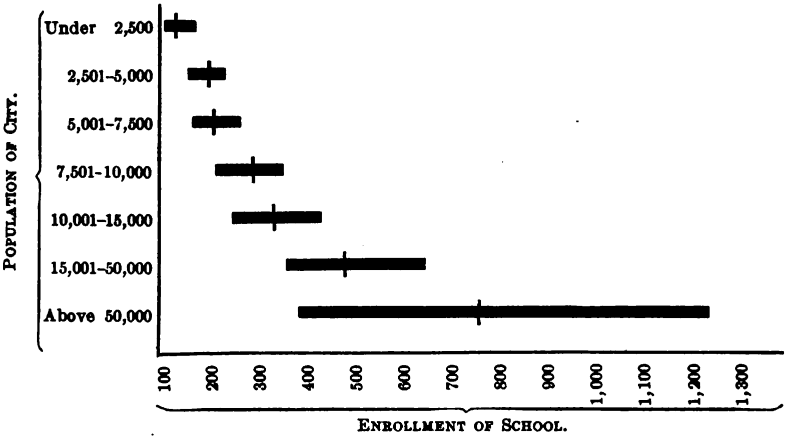

Fig. 1.—First and third quartiles and median enrollment.—The limits of each line represent the first and third quartiles for its particular group of cities. The central point represents the median enrollment.

The great range in size of schools in large cities is doubtless due to the fact that the range of conditions is greater than in the smaller cities. The large city with its large population is divided into many different social groups on the basis of nationality, varied religions, industrial and commercial interests, etc. Each group has its peculiar needs which must be met by schools of different sorts. The large city, therefore, maintains all sorts and kinds of schools because its needs are of all sorts and of all kinds. Because of concentration of population and resources a great many special and private schools are maintained in addition to the usually large public high schools.

We also notice a rather large variation in the size of schools from State to State. The median enrollment for the several States ranges from 106 in North Dakota to 243 in Indiana. It seems that the large enrollments are found in the older and more densely populated States, Ohio, Indiana, Illinois, Michigan, and Iowa, and the smaller enrollments in the newer States and where the population is more scattered, North Dakota, Nebraska, and South Dakota.

In most cases the results obtained here are in agreement with the findings of Coffman and Jessup in their investigation based upon these same reports for the year 1912–13, except that the median enrollment as found by them is with few exceptions slightly less than that shown in Table II.

### TABLE III.

| | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. | Montana. |
|---|---|---|---|---|---|---|---|---|
| Number of students in fourth year.... | 5,351 | 2,492 | 2,399 | 2,924 | 3,260 | 2,885 | 1,633 | 320 |
| Number in third year.............. | 6,498 | 2,864 | 2,844 | 3,429 | 4,170 | 3,690 | 2,205 | 410 |
| Number in second year.............. | 9,609 | 3,996 | 3,726 | 4,978 | 5,530 | 4,856 | 3,296 | 567 |
| Number in first year.............. | 13,810 | 5,116 | 4,998 | 7,142 | 7,904 | 7,428 | 5,568 | 860 |
| Total.............. | 35,268 | 14,468 | 13,967 | 18,473 | 20,864 | 18,859 | 12,702 | 2,157 |
| Number of schools.............. | 102 | 49 | 53 | 73 | 85 | 61 | 36 | 10 |
| Per cent of students in fourth year.... | 15.2 | 17.2 | 17.2 | 15.8 | 15.6 | 15.3 | 12.8 | 14.8 |
| Per cent in third year.............. | 18.4 | 19.8 | 20.3 | 18.5 | 20.0 | 19.6 | 17.2 | 19.1 |
| Per cent in second year.............. | 27.2 | 27.7 | 26.7 | 27.0 | 26.5 | 25.7 | 26.0 | 26.2 |
| Per cent in first year.............. | 39.2 | 35.3 | 35.8 | 38.7 | 37.9 | 39.4 | 44.0 | 39.9 |

| | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. | Total. |
|---|---|---|---|---|---|---|---|
| Number of students in fourth year.............. | 1,384 | 584 | 6,845 | 487 | 450 | 3,351 | 34,365 |
| Number in third year.............. | 1,649 | 674 | 8,272 | 607 | 540 | 4,126 | 41,978 |
| Number in second year.............. | 1,964 | 929 | 10,930 | 907 | 765 | 5,163 | 57,216 |
| Number in first year.............. | 3,034 | 1,504 | 15,289 | 1,262 | 1,120 | 6,995 | 82,030 |
| Total.............. | 8,031 | 3,691 | 41,336 | 3,263 | 2,875 | 19,635 | 215,589 |
| Number of schools.............. | 43 | 28 | 124 | 14 | 15 | 72 | 765 |
| Per cent of students in fourth year.............. | 17.2 | 15.8 | 16.6 | 15.0 | 15.6 | 17.1 | 15.9 |
| Per cent in third year.............. | 20.6 | 18.3 | 20.0 | 18.6 | 18.8 | 21.0 | 19.5 |
| Per cent in second year.............. | 24.4 | 25.2 | 26.4 | 27.7 | 26.7 | 26.3 | 26.5 |
| Per cent in first year.............. | 37.8 | 40.7 | 37.0 | 38.7 | 38.9 | 35.6 | 38.1 |

### TABLE IV.

| | Under 2,500 | 2,501–5,000 | 5,001–7,500 | 7,501–10,000 | 10,001–15,000 | 15,001–50,000 | 50,001 and over. | Total. |
|---|---|---|---|---|---|---|---|---|
| Number of students in fourth year.... | 3,740 | 6,003 | 3,800 | 3,117 | 3,667 | 5,880 | 8,158 | 34,365 |
| Number in third year.............. | 4,383 | 6,945 | 4,683 | 4,040 | 4,605 | 7,404 | 9,918 | 41,978 |
| Number in second year.............. | 5,538 | 8,648 | 6,028 | 5,412 | 6,320 | 10,029 | 15,241 | 57,216 |
| Number in first year.............. | 7,420 | 12,238 | 8,548 | 7,752 | 8,960 | 14,332 | 22,780 | 82,030 |
| Total.............. | 21,081 | 33,834 | 23,059 | 20,321 | 23,552 | 37,645 | 56,097 | 215,589 |
| Number of schools.............. | 165 | 200 | 105 | 74 | 69 | 74 | 78 | 765 |
| Per cent of students in fourth year..... | 17.8 | 17.7 | 16.5 | 15.4 | 15.5 | 15.6 | 14.5 | 15.9 |
| Per cent in third year.............. | 20.8 | 20.6 | 20.3 | 19.9 | 19.5 | 19.6 | 17.7 | 19.5 |
| Per cent in second year.............. | 26.2 | 25.6 | 26.2 | 26.6 | 26.9 | 26.7 | 27.2 | 26.5 |
| Per cent in first year.............. | 35.2 | 36.1 | 37.0 | 38.1 | 38.1 | 38.1 | 40.6 | 38.1 |

### DISTRIBUTION OF STUDENTS IN THE FOUR YEARS.

One of the great problems confronting secondary education is that of keeping students in the high school after they have enrolled for the freshman year. One of the measures of the inefficiency of a school is found in its inability to keep its students in school long enough for them to complete a well-rounded curriculum, even if this is only a two-year course. The extent to which a school holds its students tells in some degree the extent to which that school is meeting the needs of its students and of the community in which it is situated.

Concerning the distribution of students in the four years of the high school we have reports from 765 schools. Tables III and IV are based upon these reports, the one showing the variation in the distribution of students from State to State, and the other from city to city. Each table is composed of two parts, the upper half giving the exact numbers of students found in each of the four years in the various States and groups of cities and the lower half the percentages. Thus the first column of Table III would be read in this way: Of the 35,268 students in the 102 schools reporting from Illinois, 5,351, or 15.2 per cent, are in the fourth year; 6,498, or 18.4 per cent, in the third year; 9,609, or 27.2 per cent, in the second year; and 13,810, or 39.2 per cent, in the first year. Table IV is read in the same way.

From an examination of the tables it is not difficult to see in what year there is the greatest number of students. The number in the first year ranges from 35.3 per cent in Indiana to 44 per cent in Missouri, and in the fourth year from 12.8 per cent in Missouri to 17.2 per cent in Indiana, Iowa, and Nebraska. Thus it is seen that, while there is in every case a very large preponderance of students in the first year, the schools in some States hold their students considerably better on the average than those in other States. This variation probably has some relation to variations in population and enrollment. But that population is not the only factor to be considered is brought out by the fact that the variation is greater from State to State than from cities of one size to cities of another size. The same may also be said of enrollment, since the median-sized school in Indiana is larger than in any other State. Yet Indiana surpasses all the other States in the ability to hold students. The factors which operate in holding a student in school or in causing him to drop out are undoubtedly many and complex.

This same variation is shown in the groups of cities, although not so markedly as in the case of the States. There seems to be a greater tendency, however, for students to leave school in the large cities than in the small cities, since the percentage of students in the fourth year decreases more or less gradually from 17.8 per cent in cities having a population of 2,500 or less to 14.5 per cent in cities of over

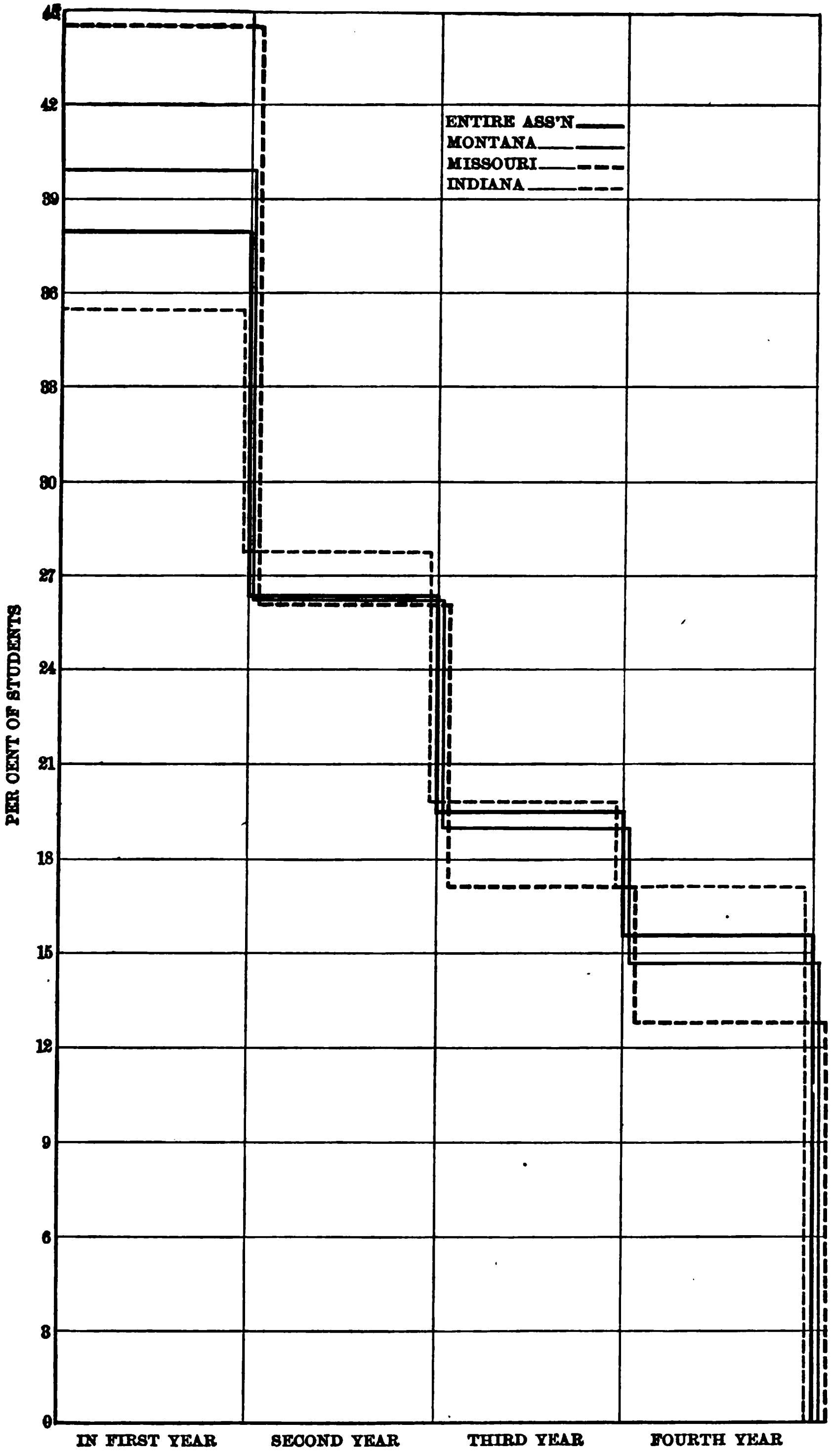

FIG. 2.—Distribution of students in the four high-school years in Montana, Missouri, Indiana, and the entire North Central Association.

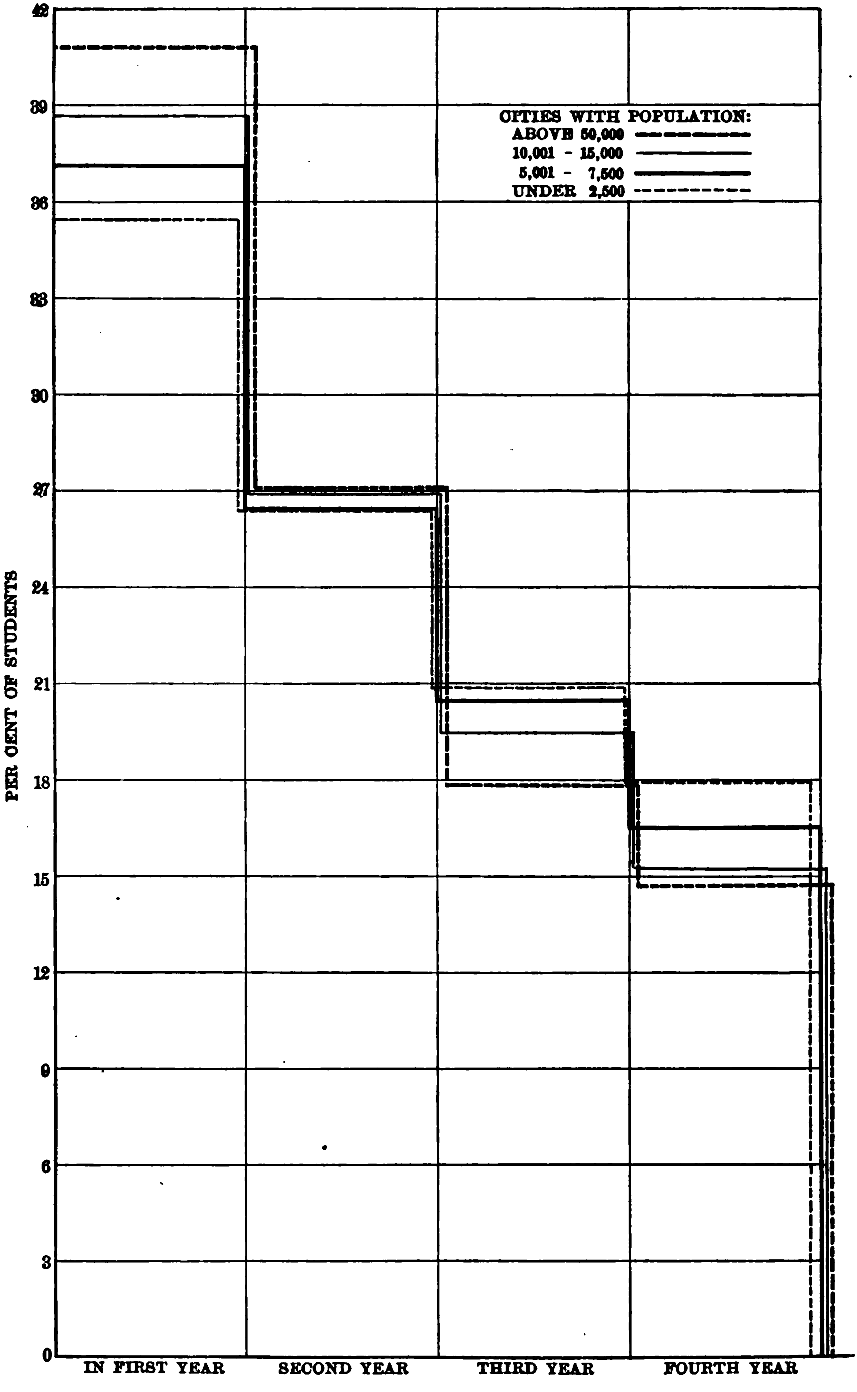

FIG. 3.—Distribution of students in the four high-school years in different groups of cities.

50,000 population, and the percentage in the first year increases from 35.2 per cent to 40.6 per cent. This is probably due to the fact that in the large cities there are more temptations of economic, social, or antisocial character to draw the interests of the student from the school.

TABLE V.

| | United States, 1912. | North-Central Association, 1913-14. |
|---|---|---|
| Per cent of students in fourth year | 13.45 | 15.90 |
| Per cent in third year | 18.50 | 19.50 |
| Per cent in second year | 27.05 | 26.50 |
| Per cent in first year | 41.00 | 38.10 |
| Total | 100.00 | 100.00 |

In figures 2 and 3 an attempt is made to bring out this variaion. The four curves in figure 2 represent the two extreme States in this matter of distribution of students—Missouri and Indiana—a median State—Illinois—and the association as a whole. In figure 3 the four curves represent the two extreme groups of cities and two intermediate groups. The bar diagrams in figure 4 bring out the distribution of students in the four years for the entire association. It can readily be seen from this figure that there is not only absolutely more dropping out of school between the first and second years than between any other two years, but that there is proportionately more.

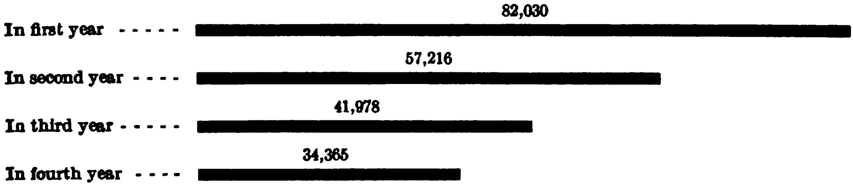

FIG. 4.—Number of students in different high-school years (in entire association).

It is interesting to make a comparison between the schools of the North Central Association and the schools of the United States as a whole in this matter of distribution of the students in the four years. Table V gives us such a comparison. The percentages for the United States were taken from page 7 of the second volume of the United States Commissioner's Report for 1913 and are based upon the estimated distribution of the enrollment for 1912. The figures slightly favor the schools of the association. If the figures are correct, the difference in favor of the association is probably due to the fact that these schools are a selected group, having better equipment, teachers, etc., than the average school and located in a section of the country in which much attention is being given to secondary education.

TABLE VI.

| | First year. | Second year. | Third year. | Fourth year. | Total. |
|---|---|---|---|---|---|
| Number of students who dropped out of school | 4,431 | 2,869 | 1,624 | 248 | 9,172 |
| Percentage of students who dropped out of school | 48.4 | 31.3 | 17.6 | 2.7 | 100 |

A matter somewhat related to that just discussed is found in Table VI. A special inquiry was made regarding the number of students who had dropped out of school from the class graduating in 1913. The class in question was the freshman class in 1909–10, the sophomore class in 1910–11, the junior class in 1911–12, and the senior class in 1912–13. Reports were received from 271 schools. An analysis of these 271 reports has given us Table VI. The table is read thus: Of the 9,172 students dropping out of school who belonged to the freshman class of 1908–9, 4,431, or 48.4 per cent, dropped out during the first or freshman year; 2,869, or 31.3 per cent, during the second or sophomore year; 1,624, or 17.6 per cent, during the third or junior year; and only 248, or 2.7 per cent, during the fourth or senior year.

This table clearly shows that the chances that a student will drop out of school before graduation rapidly grow less the longer he remains in school. Very nearly 80 per cent of those who leave school before graduation drop out before the junior year, while only 2.7 per cent drop out during the senior year.

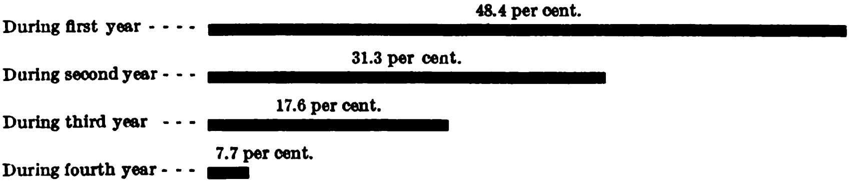

FIG. 5.—Percentage of students dropping out of school in different high-school years.

In figure 5 the relation of one high-school year to another in this respect is very clearly shown by the use of bar diagrams.

TABLE VII.

| Number of students per class. | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. |
|---|---|---|---|---|---|---|---|
| 1-10 | 849 | 445 | 250 | 496 | 612 | 459 | 416 |
| 11-20 | 2,435 | 1,536 | 1,044 | 1,426 | 1,836 | 1,446 | 936 |
| 21-30 | 3,313 | 1,395 | 1,239 | 1,756 | 1,898 | 1,650 | 1,333 |
| 31-40 | 870 | 73 | 78 | 234 | 222 | 206 | 246 |
| 41-50 | 93 | 6 | 3 | 43 | 25 | 42 | 62 |
| Total | 7,560 | 3,453 | 2,614 | 3,955 | 4,593 | 3,803 | 2,993 |
| Median | 21.5 | 18.5 | 20 | 26 | 19 | 20 | 21 |
| Number of schools | 115 | 51 | 48 | 73 | 81 | 58 | 41 |
| Per cent of classes having— | | | | | | | |
| 1-10 students | 11.2 | 12.9 | 9.5 | 12.6 | 13.3 | 12.1 | 13.9 |
| 11-20 | 32.2 | 44.5 | 40.0 | 36.0 | 40.0 | 38.0 | 31.3 |
| 21-30 | 43.8 | 40.4 | 47.4 | 44.4 | 41.4 | 43.4 | 44.5 |
| 31-40 | 11.5 | 2.1 | 3.0 | 5.9 | 4.8 | 5.4 | 8.2 |
| 41-50 | 1.3 | .1 | .1 | 1.1 | .5 | 1.1 | 2.1 |

TABLE VII—Continued.

| Number of students per class. | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. | Total. |
|---|---|---|---|---|---|---|---|
| 1-10 | 232 | 227 | 471 | 105 | 73 | 388 | 5,023 |
| 11-20 | 615 | 486 | 2,571 | 238 | 280 | 1,384 | 16,233 |
| 21-30 | 687 | 255 | 4,467 | 228 | 259 | 1,683 | 20,163 |
| 31-40 | 59 | 21 | 453 | 59 | 22 | 175 | 2,718 |
| 41-50 | 0 | 9 | 36 | 13 | 3 | 21 | 356 |
| Total | 1,593 | 998 | 7,998 | 643 | 637 | 3,651 | 44,493 |
| Median | 19 | 15.5 | 22 | 19 | 19 | 20.5 | 20 |
| Number of schools | 44 | 27 | 126 | 13 | 14 | 65 | 756 |
| Per cent of classes having— | | | | | | | |
| 1-10 students | 14.6 | 22.7 | 5.9 | 16.3 | 11.5 | 10.6 | 11.3 |
| 11-20 | 38.6 | 48.8 | 32.1 | 37.0 | 44.0 | 37.9 | 36.5 |
| 21-30 | 43.1 | 25.5 | 55.8 | 35.5 | 40.7 | 46.1 | 45.3 |
| 31-40 | 3.7 | 2.1 | 5.7 | 9.2 | 3.5 | 4.8 | 6.1 |
| 41-50 | .0 | .9 | .5 | 2.0 | .3 | .6 | .8 |

| Number of students per class. | 0-100 | 101-200 | 201-300 | 301-500 | 501-1,000 | 1,001 and over. | Total. |
|---|---|---|---|---|---|---|---|
| 1-10 | 831 | 1,873 | 774 | 920 | 335 | 290 | 5,023 |
| 11-20 | 950 | 4,795 | 3,000 | 3,602 | 2,147 | 1,739 | 16,233 |
| 21-30 | 306 | 3,200 | 3,112 | 4,957 | 3,319 | 5,269 | 20,163 |
| 31-40 | 39 | 491 | 324 | 523 | 354 | 987 | 2,718 |
| 41-50 | 9 | 36 | 46 | 74 | 61 | 130 | 356 |
| Total | 2,135 | 10,395 | 7,256 | 10,076 | 6,216 | 8,415 | 44,493 |
| Median | 12.5 | 17 | 19.5 | 21 | 22 | 24 | 20 |
| Number of schools | 78 | 305 | 146 | 139 | 51 | 37 | 756 |
| Per cent of classes having— | | | | | | | |
| 1-10 students | 38.9 | 18.0 | 10.7 | 9.2 | 5.4 | 3.5 | .......... |
| 11-20 | 44.5 | 46.1 | 41.4 | 35.7 | 34.5 | 20.7 | .......... |
| 21-30 | 14.4 | 30.7 | 42.8 | 49.2 | 53.4 | 62.5 | .......... |
| 31-40 | 1.8 | 4.8 | 4.5 | 5.2 | 5.7 | 11.7 | .......... |
| 41-50 | .4 | .4 | .6 | .7 | 1.0 | 1.6 | .......... |

### SIZE OF CLASSES.

The size of a class has a great deal to do with the efficiency of instruction. The association, considering classes of over 30 too large to secure the maximum of efficiency, discourages the maintenance of classes of this size.

Table VII represents the analysis of 756 reports concerning the size of classes. This table is composed of two parts, the one showing the relation of location in the different States, the other the relation of enrollment in the schools to the size of classes. And again each of these parts is divided into two divisions, the upper giving the actual number of cases and the lower the percentages. The table should be read thus: Of the 7,560 classes in the 115 schools in Illinois reporting on this item, 849, or 11.2 per cent, have from 1 to 10 students; 2,435, or 32.2 per cent, have from 11 to 20; 3,313, or 43.8 per cent, have from 21 to 30, etc., and the median size of class for the State of Illinois is 21½ students.

For the entire association it is seen that the median is 20 students per class and that the largest percentage of classes, 45.3 per cent, is found in classes of the third size, those having from 21 to 30 students. As to median the States range from 15½ in North Dakota to 26 in

Kansas. The largest percentage of classes is found in classes of the third size, except in the States of Indiana, North Dakota, Oklahoma, and South Dakota, in which States the greatest number of classes is found in the second group, i. e., those having from 11 to 20 students. The frequency of the small classes having 10 students or less varies from 22.7 per cent in North Dakota to 5.9 per cent in Ohio, while the percentage of classes of more than 30 students varies from 2.2 per cent in Indiana to 12.8 per cent in Illinois.

From the foregoing it is evident that the size of class is by no means standardized and that there is a great variation from State to State. This variation is probably due in many cases to the presence or absence of large high schools within the State, but that large high schools do not always necessitate large classes is proved by the case of Indiana, where we find the smallest percentage of large classes combined with the largest median enrollment. Another important factor which probably operates in a good many cases is the rapid increase in enrollment from year to year, with the result that the facilities for instruction lag a year or two behind the actual needs of the school.

A further examination of the table shows that there is a positive correlation between enrollment and size of classes. The median increases steadily from 12½ in schools having an enrollment of 100 or less to 24, nearly double, in schools with an enrollment of 1,001 or larger; the percentage of small classes of from 1 to 10 students decreases from 38.9 per cent in the smallest schools to 3.5 per cent in the largest schools; and the percentage of classes with over 30 students increases from 2.2 per cent in the smallest schools to 13.3 per cent in the largest. It is a notable fact in this connection that while in the majority of features the large schools show a greater tendency to vary among themselves than the small schools, the exact opposite is true here. The largest percentage of classes found in any one group anywhere in the table is 62.5 per cent, which is the percentage of classes of 21 to 30 students in schools having an enrollment of 1,001 and over.

This relation between size of classes and enrollment is shown graphically in figures 6 and 7. In figure 6 the bar diagrams represent the median size of class for the schools grouped according to enrollment. The four curves in figure 7 are based upon the percentage tables showing the relation between size of class and enrollment.

This great variation in size of classes presents a rather serious problem to secondary education. If the work done in a large class is as efficient as that done in a small class, then there are many teachers in many schools who are not using their energy or the finances of the public school to the best advantage. If, on the other hand, as is probably much nearer the truth, the individual students in the large classes are not so efficiently taught as they would be if the classes were smaller, the definition of the unit of the North Central Association should be restated or the size of classes standardized to a greater extent than we find them at present. It is true, of course, that the size of class that can be taught most efficiently varies with the subject and with the teacher, but hardly to the extent that it is found to be varying in the association.

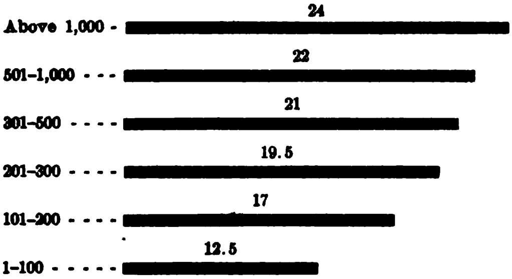

FIG. 6.—Median number of students per class in schools having different enrollments.

TABLE VIII.

| Students per teacher. | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | .... | 1 | .... | .... | 1 | .... | .... | .... | .... | .... | .... | .... | .... | 2 |
| 3 | .... | 0 | .... | .... | 0 | .... | 2 | .... | .... | .... | .... | .... | .... | 2 |
| 4 | .... | 0 | .... | .... | 0 | .... | 0 | 1 | .... | 1 | .... | .... | .... | 2 |
| 5 | 3 | 0 | .... | 1 | 0 | .... | 0 | 0 | .... | 0 | .... | .... | .... | 4 |
| 6 | 3 | 0 | .... | 2 | 0 | .... | 1 | 3 | .... | 3 | .... | 1 | 1 | 14 |
| 7 | 3 | 0 | .... | 0 | 0 | 1 | 1 | 1 | .... | 1 | .... | 0 | 1 | 8 |
| 8 | 1 | 0 | .... | 0 | 3 | 1 | 2 | 1 | 2 | 1 | .... | 0 | 0 | 11 |
| 9 | 2 | 1 | 1 | 0 | 1 | 0 | 2 | 1 | 1 | 2 | .... | 0 | 0 | 11 |
| 10 | 4 | 1 | 0 | 1 | 1 | 2 | 1 | 0 | 2 | 1 | .... | 0 | 0 | 13 |
| 11 | 5 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 6 | 2 | .... | 0 | 1 | 17 |
| 12 | 4 | 2 | 0 | 1 | 3 | 4 | 1 | 0 | 4 | 0 | 1 | 0 | 1 | 21 |
| 13 | 1 | 2 | 1 | 2 | 2 | 4 | 4 | 1 | 1 | 2 | 0 | 1 | 2 | 23 |
| 14 | 6 | 3 | 2 | 1 | 0 | 4 | 3 | 0 | 1 | 4 | 2 | 2 | 4 | 32 |
| 15 | 7 | 5 | 3 | 2 | 2 | 5 | 0 | 3 | 2 | 1 | 0 | 3 | 5 | 38 |
| 16 | 6 | 2 | 6 | 4 | 3 | 8 | 1 | 1 | 2 | 3 | 1 | 3 | 8 | 48 |
| 17 | 6 | 3 | 6 | 2 | 6 | 11 | 0 | 1 | 2 | 5 | 1 | 1 | 8 | 52 |
| 18 | 11 | 9 | 8 | 8 | 14 | 3 | 3 | 3 | 1 | 4 | 1 | 1 | 8 | 74 |
| 19 | 8 | 3 | 8 | 8 | 8 | 4 | 4 | 6 | 1 | 10 | 1 | 2 | 10 | 73 |
| 20 | 15 | 6 | 7 | 8 | 10 | 2 | 5 | 8 | 2 | 10 | 2 | 1 | 8 | 84 |
| 21 | 12 | 13 | 7 | 8 | 9 | 2 | 3 | 4 | 1 | 12 | 0 | 0 | 5 | 76 |
| 22 | 12 | 3 | 4 | 5 | 4 | 1 | 4 | 7 | .... | 9 | 1 | 0 | 5 | 55 |
| 23 | 4 | 3 | 4 | 8 | 10 | 5 | 6 | 3 | .... | 8 | 2 | 1 | 5 | 59 |
| 24 | 11 | 2 | 3 | 5 | 4 | 4 | 1 | 0 | .... | 12 | 0 | 1 | 5 | 48 |
| 25 | 6 | 2 | 2 | 1 | 5 | 1 | 2 | 2 | .... | 9 | 1 | 0 | 5 | 36 |
| 26 | 4 | 0 | 1 | 2 | 2 | 2 | 0 | 1 | .... | 16 | 1 | 0 | 2 | 31 |
| 27 | 2 | 0 | 0 | 4 | 2 | 1 | 2 | 1 | .... | 13 | 2 | 0 | 3 | 30 |
| 28 | 5 | 0 | 0 | 1 | 2 | 2 | 2 | 2 | .... | 6 | 2 | 1 | 1 | 24 |
| 29 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | .... | 8 | .... | .... | 1 | 12 |
| 30 | 3 | 1 | .... | 1 | 2 | 1 | 0 | 1 | .... | 4 | .... | .... | .... | 13 |
| 31 | 1 | .... | .... | .... | 0 | 1 | 0 | .... | .... | 1 | .... | .... | .... | 3. |
| 32 | .... | .... | .... | .... | 1 | .... | 1 | .... | .... | 2 | .... | .... | .... | 4 |
| 33 | .... | .... | .... | .... | 0 | .... | .... | .... | .... | 1 | .... | .... | .... | 1 |
| 34 | .... | .... | .... | .... | 0 | .... | .... | .... | .... | 3 | .... | .... | .... | 3 |
| 62 | .... | .... | .... | .... | 1 | .... | .... | .... | .... | .... | .... | .... | .... | 1 |
| Total | 145 | 63 | 64 | 75 | 98 | 71 | 51 | 51 | 28 | 154 | 18 | 18 | 89 | 925 |
| Median | 20 | 19 | 19 | 20 | 20 | 17 | 20 | 20 | 12 | 23 | 21 | 16 | 19 | 20 |

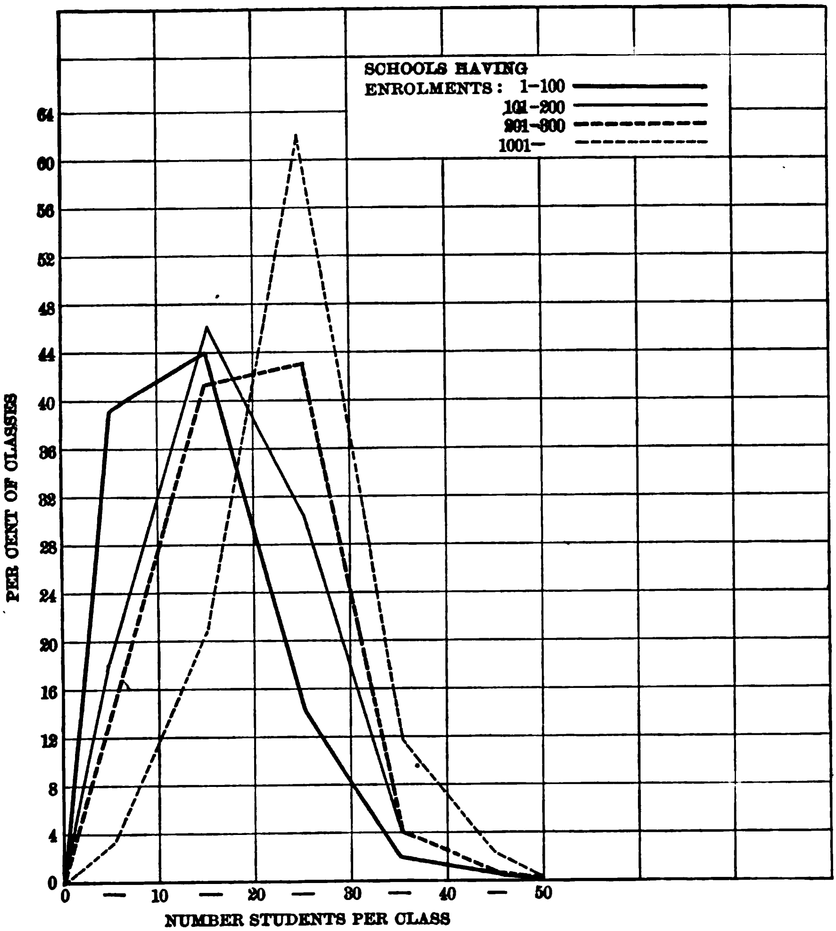

FIG. 7.—Relation between size of classes and enrollment.

TABLE VIII—Continued.

| Students per teacher. | Under 2,500 | 2,501-5,000 | 5,001-7,500 | 7,500-10,000 | 10,001-15,000 | 15,001-50,000 | 50,001 and over. | Total. | 1-100 | 101-200 | 201-300 | 301-500 | 501-1,000 | 1,001 and over | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | .... | .... | 1 | 1 | .... | .... | .... | 2 | 2 | .... | .... | .... | .... | .... | 2 |
| 3 | .... | .... | 0 | 2 | .... | .... | .... | 2 | 1 | 1 | .... | .... | .... | .... | 2 |
| 4 | 1 | .... | 0 | 0 | .... | .... | 1 | 2 | 2 | 0 | .... | .... | .... | .... | 2 |
| 5 | 1 | .... | 0 | 0 | .... | 1 | 2 | 4 | 3 | 1 | .... | .... | .... | .... | 4 |
| 6 | 3 | 1 | 0 | 4 | 2 | 1 | 3 | 14 | 13 | 1 | .... | .... | .... | .... | 14 |
| 7 | 3 | 0 | 0 | 0 | 0 | 2 | 3 | 8 | 5 | 2 | 1 | .... | .... | .... | 8 |
| 8 | 4 | 1 | 1 | 1 | 1 | 0 | 3 | 11 | 10 | 1 | 0 | .... | .... | .... | 11 |
| 9 | 5 | 1 | 1 | 0 | 0 | 0 | 4 | 11 | 5 | 4 | 1 | 1 | .... | .... | 11 |
| 10 | 2 | 3 | 0 | 2 | 0 | 2 | 4 | 13 | 6 | 6 | 0 | 1 | .... | .... | 13 |
| 11 | 8 | 6 | 2 | 0 | 0 | 0 | 1 | 17 | 11 | 5 | 1 | 0 | .... | .... | 17 |
| 12 | 7 | 5 | 4 | 2 | 1 | 2 | 0 | 21 | 6 | 13 | 2 | 0 | .... | .... | 21 |
| 13 | 10 | 7 | 3 | 1 | 0 | 1 | 1 | 23 | 8 | 15 | 0 | 0 | .... | .... | 23 |
| 14 | 7 | 12 | 5 | 1 | 2 | 2 | 3 | 32 | 5 | 19 | 4 | 4 | .... | .... | 32 |
| 15 | 11 | 13 | 4 | 3 | 1 | 4 | 2 | 38 | 7 | 26 | 1 | 4 | .... | .... | 38 |
| 16 | 20 | 17 | 5 | 2 | 2 | 1 | 1 | 48 | 5 | 34 | 4 | 5 | .... | .... | 48 |
| 17 | 17 | 15 | 5 | 5 | 4 | 5 | 1 | 52 | 0 | 36 | 11 | 4 | 1 | .... | 52 |
| 18 | 18 | 25 | 10 | 8 | 5 | 5 | 3 | 74 | 0 | 37 | 23 | 12 | 2 | .... | 74 |
| 19 | 21 | 15 | 13 | 7 | 6 | 9 | 2 | 73 | 4 | 36 | 17 | 10 | 6 | .... | 73 |
| 20 | 16 | 23 | 12 | 8 | 9 | 8 | 8 | 84 | 4 | 34 | 17 | 16 | 11 | 2 | 84 |
| 21 | 11 | 18 | 15 | 8 | 7 | 11 | 6 | 76 | .... | 27 | 21 | 17 | 9 | 2 | 76 |
| 22 | 9 | 8 | 12 | 5 | 2 | 15 | 4 | 55 | .... | 16 | 16 | 11 | 10 | 2 | 55 |
| 23 | 7 | 20 | 5 | 1 | 7 | 6 | 13 | 59 | .... | 13 | 19 | 12 | 7 | 8 | 59 |
| 24 | 3 | 8 | 7 | 6 | 5 | 9 | 10 | 48 | .... | 7 | 10 | 16 | 8 | 7 | 48 |
| 25 | 2 | 9 | 4 | 7 | 2 | 6 | 6 | 36 | .... | 8 | 8 | 10 | 7 | 3 | 36 |
| 26 | 2 | 12 | 1 | 3 | 4 | 1 | 8 | 31 | .... | 7 | 8 | 6 | 6 | 4 | 31 |
| 27 | 3 | 7 | 3 | 3 | 4 | 3 | 7 | 30 | .... | 9 | 5 | 8 | 3 | 5 | 30 |
| 28 | 3 | 2 | 5 | 1 | 5 | 0 | 8 | 24 | .... | 6 | 4 | 6 | 2 | 6 | 24 |
| 29 | 1 | 0 | 2 | 4 | 1 | 1 | 3 | 12 | .... | 2 | 4 | 3 | 1 | 2 | 12 |
| 30 | 1 | 4 | 0 | 1 | 2 | 1 | 4 | 13 | .... | 2 | 2 | 3 | 0 | 6 | 13 |
| 31 | .... | 0 | 0 | 0 | 0 | 1 | 2 | 3 | .... | 0 | 0 | 1 | 1 | 1 | 3 |
| 32 | .... | 0 | 0 | 0 | 1 | 3 | .... | 4 | .... | 0 | 0 | 2 | 2 | .... | 4 |
| 33 | .... | 0 | 0 | 1 | .... | 0 | .... | 1 | .... | 0 | 0 | 1 | 0 | .... | 1 |
| 34 | .... | 0 | 2 | .... | .... | 1 | .... | 3 | .... | 1 | 1 | 1 | 0 | .... | 3 |
| 62 | .... | 1 | .... | .... | .... | .... | .... | 1 | .... | .... | .... | .... | 1 | .... | 1 |
| Total | 196 | 288 | 122 | 87 | 78 | 101 | 113 | 925 | 97 | 369 | 180 | 154 | 77 | 48 | 925 |
| Median | 17 | 19 | 20 | 20 | 21 | 21 | 23 | 20 | 11 | 18 | 21 | 22 | 22 | 26 | 20 |

### NUMBER OF STUDENTS PER TEACHER.

An aspect of the high school very closely related to the size of classes and upon which the size of classes very largely depends is the number of students per teacher. If a school is deficient in its number of teachers, the size of classes in many cases will have to be increased. That the association recognizes the prime importance of this factor for efficiency is shown by the following statement found in its standards:

> All schools whose records show an excessive number of pupils per teacher, as based on average number belonging, even though they may technically meet all other requirements, are rejected. The association recognizes 30 as a maximum.

Let us see if this standard requirement is met by all the schools of the association.

Table VIII, based upon the reports of 925 schools representing 13 States, shows just where each school stands in this matter of the number of students per teacher. The analysis of the reports has been made on the three bases of State, population, and enrollment. The table should be read as follows: Of the 145 schools reporting from the State of Illinois, 3 have a teacher for every 5 students, 3 a teacher for every 6 students, 3 a teacher for every 7 students, etc., and the median number of students per teacher for the entire State is 20.

The surprising fact, which is seen at once, is the great variation from school to school in this matter. Two schools report 1 teacher for every 2 students, while 1 reports only 1 teacher for every 62 students; and 20, which is the most frequent number of students per teacher, is but slightly more frequent than either 18, 19, or 21. We find a considerable variation in the median among the States, ranging from 12 in North Dakota to 23 in Ohio. Of schools having over 30 students per teacher there are 12, of which 7 are in the State of Ohio; and there are 13 schools with just 30 students per teacher.

The evidence of correlation between density of population and the number of students per teacher is not in accord with the results obtained by Coffman and Jessup in their investigation of a year ago. They found that there was no correlation between the two. As shown by the median here, which increases with the population or size of city from 17 to 23, there does seem to be some correlation. However, the correlation is evidently an indirect correlation. It is really between enrollment and number of students per teacher, but, since the large schools are usually found in the large cities, there is seemingly a correlation with density of population.

That enrollment is the real factor influencing the number of students per teacher is very clearly shown by an examination of that portion of the table in which the grouping of schools is made on the basis of enrollment. It is seen that the median increases from only 11 in the schools having enrollments of 100 and less to 26 in the schools of enrollments of 1,001 and over. It is a noteworthy fact that between the very smallest schools and the next group larger, and between the very largest schools and the next group smaller, are found the greatest differences between the medians, while the medians of the four intermediate groups of schools vary but little. The very small number of students per teacher found in the schools of 100 students and under may be due to the fact that, since the association sets four teachers as a minimum, those small schools which do have a large number of students per teacher are not admitted to membership in the association because they do not have a sufficient number of teachers. Of course, this is not the sole cause, but simply one of the many factors operating.

The influence of enrollment upon number of students per teacher is brought out again in figure 8, the bar diagrams representing the medians in Table VIII.

Table IX, in which the average number of students per teacher has been worked out, is simply a view from another angle of the material presented in Table VIII.

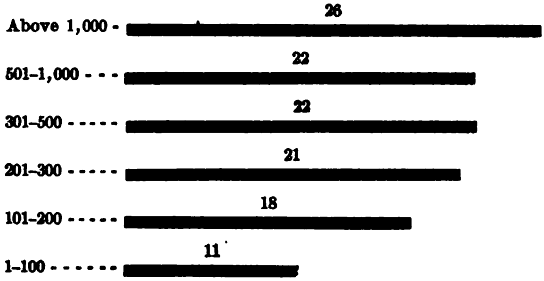

FIG. 8.—Median number of students per teacher in schools having different enrollments.

In conclusion, it may be said that the number of students per teacher presents a feature of the school which is far from being standardized, and that even the rather liberal requirement of one teacher for every 30 students is not being lived up to in at least 12 instances. Of course, the number of students that can be handled most efficiently by a teacher depends partly upon the teacher. One teacher may be able to teach 30 students just as well as another can teach 10, and the small number of students per teacher in the small schools may be more than counterbalanced by the presence of more efficient teachers in the large schools. Nevertheless, it is evident that in many cases there are either too many or too few teachers.

In the standards of the association the emphasis is placed upon the number of students per teacher rather than upon the number of students per class. It would seem that this is misplaced emphasis, because the number of students per teacher is significant only in so far as it determines the number of students per class. It is in the class that the instruction is given. The number of students per teacher may be very low, and yet the number of students in some classes much too high for efficient instruction.

## TABLE IX.

| | Under 2,500 | 2,501–5,000 | 5,001–7,500 | 7,501–10,000 | 10,001–15,000 | 15,001–50,000 | 50,001 and over. | Total. |
|---|---|---|---|---|---|---|---|---|
| Total number of teachers | 1,637 | 2,115 | 1,349 | 1,228 | 1,187 | 2,492 | 4,034 | 14,042 |
| Total enrollment | 28,345 | 40,309 | 25,952 | 23,404 | 24,338 | 52,082 | 94,213 | 288,693 |
| Number of pupils per teacher | 17.4 | 19.1 | 19.3 | 19.1 | 20.6 | 21.0 | 23.4 | 20.6 |

| | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. |
|---|---|---|---|---|---|---|---|
| Total number of teachers | 2,502 | 1,137 | 969 | 943 | 1,516 | 1,156 | 945 |
| Total enrollment | 51,977 | 23,203 | 19,530 | 19,700 | 31,243 | 24,411 | 18,378 |
| Number of pupils per teacher | 20.8 | 20.4 | 20.1 | 20.9 | 20.6 | 21.1 | 19.5 |

| | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. | Total. |
|---|---|---|---|---|---|---|---|
| Total number of teachers | 510 | 285 | 2,340 | 231 | 189 | 1,319 | 14,042 |
| Total enrollment | 9,452 | 3,898 | 53,046 | 4,375 | 3,313 | 25,967 | 288,693 |
| Number of pupils per teacher | 18.5 | 13.7 | 22.7 | 19.0 | 17.5 | 19.7 | 20.6 |

## TABLE X.

| Number of teachers. | Under 2,500 | 2,501–5,000 | 5,001–7,500 | 7,501–10,000 | 10,001–15,000 | 15,001–50,000 | 50,001 and over. | Total. |
|---|---|---|---|---|---|---|---|---|
| 4 | ........ | ........ | 1 | ........ | ........ | ........ | 1 | 2 |
| 5–6 | 57 | 28 | 8 | 3 | 1 | 3 | 5 | 105 |
| 7–8 | 76 | 62 | 16 | 6 | 1 | 2 | 1 | 164 |
| 9–10 | 33 | 78 | 32 | 10 | 7 | 1 | 4 | 165 |
| 11–12 | 16 | 42 | 25 | 19 | 5 | 2 | 6 | 115 |
| 13–14 | 2 | 12 | 18 | 18 | 17 | 2 | 2 | 71 |
| 15–16 | 3 | 5 | 12 | 12 | 13 | 9 | 4 | 58 |
| 17–18 | 1 | 0 | 1 | 7 | 11 | 8 | 2 | 30 |
| 19–20 | 3 | 2 | 5 | 6 | 6 | 19 | 3 | 44 |
| 21–22 | 1 | ........ | 0 | 4 | 6 | 6 | 5 | 22 |
| 23–24 | 0 | ........ | 0 | 1 | 2 | 8 | 5 | 16 |
| 25–26 | 0 | ........ | 1 | 0 | 2 | 11 | 4 | 18 |
| 27–28 | 1 | ........ | ........ | 1 | 0 | 2 | 3 | 7 |
| 29–30 | 0 | ........ | ........ | 0 | 1 | 5 | 7 | 13 |
| 31–32 | 1 | ........ | ........ | 0 | 1 | 2 | 4 | 8 |
| 33–34 | 1 | ........ | ........ | 0 | ........ | 3 | 3 | 7 |
| 35–36 | ........ | ........ | ........ | 1 | ........ | 2 | 2 | 5 |
| 37–38 | ........ | ........ | ........ | ........ | ........ | 2 | 4 | 6 |
| 39–40 | ........ | ........ | ........ | ........ | ........ | 1 | 5 | 6 |
| 41–42 | ........ | ........ | ........ | ........ | ........ | 3 | 5 | 8 |
| 43–44 | ........ | ........ | ........ | ........ | ........ | 2 | 2 | 4 |
| 45–46 | ........ | ........ | ........ | ........ | ........ | 0 | 7 | 7 |
| 47–48 | ........ | ........ | ........ | ........ | ........ | 0 | 2 | 2 |
| 49–50 | ........ | ........ | ........ | ........ | ........ | 2 | 2 | 4 |
| 51–52 | ........ | ........ | ........ | ........ | ........ | 3 | 3 | 6 |
| 53–54 | ........ | ........ | ........ | ........ | ........ | 1 | 2 | 3 |
| 55–56 | ........ | ........ | ........ | ........ | ........ | 0 | 4 | 4 |
| 57–58 | ........ | ........ | ........ | ........ | ........ | 0 | 2 | 2 |
| 59–60 | ........ | ........ | ........ | ........ | ........ | 0 | 4 | 4 |
| 61–72 | ........ | ........ | ........ | ........ | ........ | 1 | 1 | 2 |
| 63–64 | ........ | ........ | ........ | ........ | ........ | ........ | 1 | 1 |
| 67–68 | ........ | ........ | ........ | ........ | ........ | ........ | 2 | 2 |
| 69–70 | ........ | ........ | ........ | ........ | ........ | ........ | 2 | 2 |
| 71–72 | ........ | ........ | ........ | ........ | ........ | ........ | 2 | 2 |
| 75–76 | ........ | ........ | ........ | ........ | ........ | ........ | 1 | 1 |
| 97–98 | ........ | ........ | ........ | ........ | ........ | ........ | 1 | 1 |
| 101–102 | ........ | ........ | ........ | ........ | ........ | ........ | 1 | 1 |
| Total number of schools | 195 | 229 | 119 | 88 | 73 | 100 | 114 | 918 |
| Median | 8 | 9 | 11 | 13 | 15 | 22 | 33 | 11 |

TABLE XI.

| | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. |
|---|---|---|---|---|---|---|---|
| Total number of teachers | 2,502 | 1,137 | 969 | 943 | 1,516 | 1,156 | 945 |
| Number of new teachers | 467 | 240 | 326 | 327 | 351 | 344 | 226 |
| New teachers inexperienced | 61 | 40 | 80 | 100 | 122 | 78 | 67 |
| New teachers with no special pedagogic preparation | 55 | 22 | 12 | 26 | 14 | 30 | 22 |
| New teachers not college graduates | 79 | 47 | 21 | 58 | 40 | 50 | 59 |
| Old teachers not college graduates | 330 | 138 | 92 | 126 | 161 | 124 | 168 |
| Old teachers with no special pedagogic preparation | 226 | 47 | 38 | 26 | 40 | 51 | 42 |
| Total teachers not college graduates | 409 | 185 | 113 | 184 | 201 | 174 | 227 |
| Total teachers with no special pedagogic preparation | 281 | 69 | 50 | 52 | 54 | 81 | 64 |
| Per cent of new teachers | 18.7 | 21.1 | 33.6 | 34.7 | 23.1 | 29.7 | 23.9 |
| Per cent of new teachers inexperienced | 13.1 | 16.7 | 24.6 | 30.6 | 34.9 | 22.7 | 20.7 |
| Per cent of new teachers with no special pedagogic preparation | 11.8 | 9.2 | 3.7 | 7.9 | 4.0 | 8.7 | 9.7 |
| Per cent of new teachers not college graduates | 16.9 | 19.6 | 6.4 | 17.7 | 11.4 | 14.5 | 26.1 |
| Per cent of old teachers not college graduates | 16.2 | 15.4 | 14.3 | 20.5 | 13.8 | 15.3 | 23.8 |
| Per cent of old teachers with no special pedagogic preparation | 11.1 | 5.2 | 5.9 | 4.2 | 3.4 | 6.3 | 5.8 |
| Per cent not college graduates [1] | 16.3 | 16.3 | 11.7 | 19.5 | 13.3 | 15.0 | 24.0 |
| Per cent with no special pedagogic preparation [1] | 11.2 | 6.1 | 5.2 | 5.5 | 3.6 | 7.0 | 6.8 |
| Number of schools | 141 | 61 | 65 | 75 | 96 | 71 | 51 |

| | Nebraska | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. | Total. |
|---|---|---|---|---|---|---|---|
| Total number of teachers | 510 | 285 | 2,340 | 231 | 189 | 1,319 | 14,042 |
| Number of new teachers | 172 | 114 | 493 | 109 | 81 | 411 | 3,661 |
| New teachers inexperienced | 32 | 24 | 116 | 17 | 23 | 84 | 854 |
| New teachers with no special pedagogic preparation | 8 | 10 | 76 | 3 | 7 | 29 | 314 |
| New teachers not college graduates | 29 | 28 | 55 | 18 | 16 | 73 | 573 |
| Old teachers not college graduates | 51 | 26 | 274 | 20 | 9 | 169 | 1,088 |
| Old teachers with no special pedagogic preparation | 14 | 8 | 138 | 4 | 3 | 57 | 694 |
| Total teachers not college graduates | 80 | 54 | 329 | 38 | 25 | 242 | 2,201 |
| Total teachers with no special pedagogic preparation | 22 | 18 | 214 | 7 | 10 | 86 | 1,008 |
| Per cent of new teachers | 33.7 | 40.0 | 21.1 | 47.2 | 42.9 | 30.7 | 26.2 |
| Per cent of new teachers inexperienced | 18.6 | 21.1 | 23.5 | 15.6 | 28.4 | 20.5 | 23.3 |
| Per cent of new teachers with no special pedagogic preparation | 4.6 | 8.8 | 15.4 | 2.8 | 8.6 | 7.0 | 8.6 |
| Per cent of new teachers not college graduates | 16.8 | 24.6 | 11.2 | 16.5 | 19.9 | 17.8 | 15.7 |
| Per cent of old teachers not college graduates | 15.1 | 15.2 | 14.8 | 16.4 | 8.3 | 18.6 | 16.3 |
| Per cent of old teachers with no special pedagogic preparation | 4.1 | 4.7 | 7.4 | 3.3 | 2.8 | 6.3 | 6.7 |
| Per cent not college graduates [1] | 15.7 | 19.0 | 14.1 | 16.5 | 13.2 | 18.4 | 16.2 |
| Per cent with no special pedagogic preparation [1] | 4.3 | 6.3 | 9.2 | 3.1 | 5.3 | 6.6 | 7.8 |
| Number of schools | 51 | 28 | 154 | 18 | 18 | 89 | 918 |

[1] These percentages are based upon the total number of teachers.

## THE TEACHING STAFF.

It should be said in this connection that the facts relating to the teaching staff will be dealt with further and in much greater detail in a subsequent report based upon the teachers' cards. The bulk of that material has retarded its preparation.

*The teaching staff and population.*—In Table X we have the results of an analysis of 918 reports concerning the relation between number of teachers per school and the population of the cities in which the schools are located. This table should be read thus: Of the 195 schools situated in cities having a population of 2,500 or less, 57 have 5 or 6 teachers, 76 have 7 or 8, 33 have 9 or 10, etc.; and in the whole association there are two schools with but 4 teachers, 105 with 5 or 6, etc.

The same thing is noticed here that was brought out in connection with the discussion regarding the relation between enrollment and population. The great variation in the number of teachers per school is found in the large cities, as is the great variation in size of school. In the smaller cities the number of teachers per school is practically uniform.

The correlation between the number of teachers per school and population is expressed in the median which increases from 8 in the cities with a population of 2,500 or less to 33 in cities of over 50,000 population.

*Training and experience.*—Table XI is a rather complex table based upon the grouping of the 918 schools reporting according to States. In this table the actual number of teachers is given along with several items of information regarding training and experience. The table is divided into two parts, one giving the actual numbers, the other the percentages. It should be read as follows: In the 141 schools reporting from the State of Illinois are 2,502 teachers, of whom 467 are new to the school systems in which they are teaching; of these new teachers 61 are without experience, 55 have had no special pedagogic preparation, and 79 are not graduates of a standard college; among the old teachers there are 330 who are not college graduates, and 226 who have had no special pedagogic preparation; of both old and new teachers there are 409 who are not college graduates and 281 who have had no special pedagogic training; 18.7 per cent of the teachers are new, 13.1 per cent of these new teachers are inexperienced, etc.

For the entire association we find that 3,661, or 26.2 per cent, of the 14,042 teachers reported are new to the school systems in which they are teaching. The percentage of new teachers is by no means uniform from State to State, for we notice that it varies from 18.7 per cent in Illinois to 47.2 per cent (very nearly one-half of the teachers) in Oklahoma. It is an interesting fact that in the older and more densely populated States—Ohio, Indiana, Illinois, and Michigan—where the school organization is more firmly established, there is less changing of teachers than in the newer States—Oklahoma, South Dakota, and North Dakota. In this connection it must be remembered that the schools of the North Central Association are selected schools and that the conditions among the public schools as a whole must be considerably worse than we find them here.

If these new teachers were all experienced it would not be so bad, but we find this not to be the case, for 23.3 per cent of the new teachers of the association are without experience. This also varies among the States from 13.1 per cent of new teachers who are inexperienced in Illinois to 34.9 per cent of such teachers in Michigan. It is to be noted that Illinois has not only the smallest percentage of new teachers, but of the new teachers she has the smallest percentage who are inexperienced.

In figure 9 the proportion of inexperienced teachers to the new teachers, of the inexperienced teachers to the total number of teachers, and of the new teachers to the total number of teachers is represented graphically. The large square representing all of the teachers of the association includes the smaller square representing the new teachers, which in turn includes a still smaller square which represents the inexperienced teachers.

According to the standards of the association—

> The minimum scholastic attainment of all secondary school teachers of academic subjects shall be equivalent to graduation from a college belonging to the North Central Association of Colleges and Secondary Schools. It is strongly advised that this attainment include, or be supplemented by, special study of the content and the pedagogy of the subject taught.

The table shows that the association as a whole comes nearer to conforming to the advisory portion of the standard than to the requirement, since but 7.2 per cent of the teachers have had no special pedagogic preparation, while 16.2 per cent are not graduates from a standard college. The percentage of teachers who are not college graduates ranges from 11.7 per cent in Iowa to 24 per cent in Missouri, and the percentage having no special pedagogic training, from 3.1 per cent in Oklahoma to 11.2 per cent in Illinois. Of course it may well be that in many cases the noncollege-graduate teacher is not teaching academic subjects, but that does not explain away the whole 16.2 per cent.

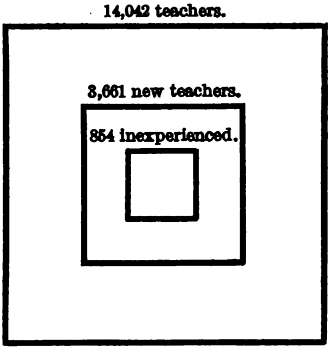

FIG. 9.—A comparison of the number of teachers to the number of new teachers and inexperienced teachers.

## TABLE XII.

| | Under 2,500. | 2,501–5,000 | 5,001–7,500 | 7,501–10,000 | 10,001–15,000 | 15,001–50,000 | 50,001 and over. | Total. |
|---|---|---|---|---|---|---|---|---|
| Total number of teachers | 1,637 | 2,115 | 1,349 | 1,228 | 1,187 | 2,492 | 4,034 | 14,042 |
| Number of new teachers | 648 | 805 | 424 | 387 | 332 | 527 | 538 | 3,661 |
| New teachers inexperienced | 199 | 243 | 94 | 111 | 66 | 89 | 52 | 854 |
| New teachers, no special pedagogic preparation | 57 | 62 | 29 | 30 | 26 | 53 | 57 | 314 |
| New teachers, not college graduates | 106 | 130 | 60 | 84 | 32 | 80 | 81 | 573 |
| Old teachers, not college graduates | 161 | 217 | 145 | 129 | 155 | 289 | 592 | 1,688 |
| Old teachers, no special pedagogic preparation | 47 | 96 | 48 | 59 | 42 | 114 | 288 | 694 |
| Total teachers, not college graduates | 267 | 347 | 205 | 213 | 187 | 369 | 673 | 2,261 |
| Total teachers, no special pedagogic preparation | 104 | 158 | 77 | 89 | 68 | 167 | 345 | 1,008 |
| Per cent of new teachers | 39.6 | 38.0 | 31.5 | 31.5 | 27.9 | 21.2 | 13.3 | 26.2 |
| Per cent of new teachers inexperienced | 30.7 | 30.2 | 22.2 | 28.7 | 19.9 | 16.9 | 9.7 | 23.3 |
| Per cent of new teachers with no special pedagogic preparation | 8.9 | 7.7 | 6.8 | 7.8 | 7.8 | 10.1 | 10.6 | 8.6 |
| Per cent of new teachers not college graduates | 16.3 | 16.1 | 14.1 | 21.7 | 9.9 | 15.2 | 15.1 | 15.7 |
| Per cent of old teachers not college graduates | 16.3 | 16.6 | 15.7 | 15.3 | 18.1 | 14.9 | 16.9 | 16.3 |
| Per cent of old teachers with no special pedagogic preparation | 4.8 | 7.4 | 5.2 | 7.0 | 4.9 | 6.1 | 8.2 | 6.7 |
| Per cent not college graduates[1] | 16.3 | 16.4 | 15.2 | 17.4 | 15.7 | 14.8 | 16.7 | 16.2 |
| Per cent with no special pedagogic preparation[1] | 6.3 | 7.5 | 5.7 | 7.2 | 5.7 | 6.7 | 8.6 | 7.2 |
| Number of schools | 195 | 229 | 119 | 88 | 73 | 100 | 114 | 918 |

[1] These percentages are based upon the total numbers of teachers.

## TABLE XIII.

| Total salary of teachers. | Colorado. | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. |
|---|---|---|---|---|---|---|---|---|
| $300–$399 | ........ | 19 | 3 | ........ | 6 | 1 | 1 | 7 |
| 400–499 | ........ | 16 | 1 | 2 | 7 | 10 | 5 | 8 |
| 500–599 | 3 | 27 | 3 | 61 | 10 | 20 | 38 | 53 |
| 600–699 | 23 | 77 | 31 | 151 | 120 | 132 | 82 | 62 |
| 700–799 | 16 | 166 | 127 | 117 | 181 | 207 | 141 | 60 |
| 800–899 | 42 | 191 | 147 | 86 | 136 | 200 | 93 | 36 |
| 900–999 | 80 | 194 | 135 | 78 | 79 | 159 | 67 | 40 |
| 1,000–1,099 | 47 | 135 | 85 | 44 | 50 | 100 | 45 | 36 |
| 1,100–1,199 | 36 | 124 | 42 | 27 | 12 | 56 | 40 | 52 |
| 1,200–1,299 | 33 | 126 | 34 | 14 | 19 | 65 | 53 | 40 |
| 1,300–1,399 | 21 | 93 | 17 | 6 | 9 | 34 | 53 | 46 |
| 1,400–1,499 | 30 | 95 | 1 | 5 | 0 | 22 | 50 | 22 |
| 1,500–1,599 | 15 | 80 | 6 | 3 | 4 | 12 | 44 | 39 |
| 1,600–1,699 | 5 | 64 | 9 | ........ | 0 | 11 | 62 | 36 |
| 1,700–1,799 | 4 | 57 | 3 | ........ | 0 | 3 | 21 | 12 |
| 1,800–1,899 | 2 | 45 | 4 | ........ | 1 | 0 | 3 | 17 |
| 1,900–1,999 | 0 | 19 | 1 | ........ | 0 | 0 | 1 | 12 |
| 2,000–2,099 | 0 | 30 | 0 | ........ | 0 | 2 | 1 | 22 |
| 2,100–2,199 | 0 | 16 | 2 | ........ | 0 | 1 | 1 | 21 |
| 2,200–2,299 | 0 | 22 | ........ | ........ | 0 | 0 | ........ | 0 |
| 2,300–2,399 | 0 | 20 | ........ | ........ | 0 | 0 | ........ | 0 |
| 2,400–2,499 | 0 | 12 | ........ | ........ | 0 | 0 | ........ | 1 |
| 2,500–2,599 | 0 | 6 | ........ | ........ | 0 | 1 | ........ | 1 |
| 2,600–2,699 | 0 | 15 | ........ | ........ | 2 | ........ | ........ | 0 |
| 2,700–2,799 | 0 | 5 | ........ | ........ | ........ | ........ | ........ | 0 |
| 2,800–2,899 | 1 | 0 | ........ | ........ | ........ | ........ | ........ | 1 |
| 2,900–2,999 | ........ | 0 | ........ | ........ | ........ | ........ | ........ | ........ |
| 3,000–3,099 | ........ | 3 | ........ | ........ | ........ | ........ | ........ | ........ |
| Above | ........ | 1 | ........ | ........ | ........ | ........ | ........ | ........ |
| Total | 358 | 1,658 | 641 | 600 | 636 | 1,036 | 801 | 624 |
| Median | 1,032 | 1,103 | 906 | 768 | 797 | 874 | 960 | 1,120 |

TABLE XIII—Continued.

| Total salary of teachers. | Montana. | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. | Total. |
|---|---|---|---|---|---|---|---|---|
| $300-$399 | ...... | 2 | ...... | 10 | ...... | ...... | 2 | 51 |
| 400- 499 | 1 | 23 | 1 | 16 | 2 | ...... | 1 | 93 |
| 500- 599 | 1 | 32 | 13 | 65 | 9 | 11 | 35 | 381 |
| 600- 699 | 0 | 73 | 30 | 135 | 37 | 19 | 132 | 1,110 |
| 700- 799 | 0 | 61 | 47 | 204 | 39 | 31 | 202 | 1,609 |
| 800- 899 | 1 | 50 | 47 | 144 | 34 | 18 | 173 | 1,388 |
| 900- 999 | 18 | 24 | 42 | 151 | 18 | 19 | 71 | 1,181 |
| 1,000- 1,099 | 19 | 31 | 20 | 143 | 12 | 17 | 85 | 869 |
| 1,100- 1,199 | 27 | 5 | 11 | 83 | 2 | 18 | 34 | 569 |
| 1,200- 1,299 | 46 | 9 | 11 | 98 | 5 | 9 | 36 | 593 |
| 1,300- 1,399 | 29 | 0 | 3 | 96 | 0 | 0 | 35 | 442 |
| 1,400- 1,499 | 14 | 1 | 3 | 75 | 11 | 2 | 3 | 334 |
| 1,500- 1,599 | 7 | 2 | 4 | 95 | 2 | 2 | 9 | 324 |
| 1,600- 1,699 | 0 | 0 | ...... | 44 | 1 | ...... | 2 | 234 |
| 1,700- 1,799 | 2 | 0 | ...... | 24 | ...... | ...... | 8 | 134 |
| 1,800- 1,899 | 1 | 0 | ...... | 39 | ...... | ...... | 7 | 119 |
| 1,900- 1,999 | 0 | 0 | ...... | 22 | ...... | ...... | 1 | 56 |
| 2,000- 2,099 | 2 | 0 | ...... | 12 | ...... | ...... | ...... | 69 |
| 2,100- 2,199 | 0 | 1 | ...... | 4 | ...... | ...... | ...... | 46 |
| 2,200- 2,299 | 0 | ...... | ...... | 6 | ...... | ...... | ...... | 28 |
| 2,300- 2,399 | 0 | ...... | ...... | 7 | ...... | ...... | ...... | 27 |
| 2,400- 2,499 | 0 | ...... | ...... | 2 | ...... | ...... | ...... | 15 |
| 2,500- 2,599 | 0 | ...... | ...... | 2 | ...... | ...... | ...... | 10 |
| 2,600- 2,699 | 0 | ...... | ...... | ...... | ...... | ...... | ...... | 17 |
| 2,700- 2,799 | 0 | ...... | ...... | ...... | ...... | ...... | ...... | 5 |
| 2,800- 2,899 | 0 | ...... | ...... | ...... | ...... | ...... | ...... | 2 |
| 2,900- 2,999 | 0 | ...... | ...... | ...... | ...... | ...... | ...... | 0 |
| 3,000- 3,099 | 1 | ...... | ...... | ...... | ...... | ...... | ...... | 4 |
| Above | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 |
| Total | 169 | 324 | 232 | 1,472 | 172 | 146 | 842 | 9,711 |
| Median | 1,238 | 752 | 853 | 1,008 | 797 | 868 | 828 | 919 |

| Total salary of teachers. | Under 2,500. | 2,501-5,000 | 5,001-7,500 | 7,501-10,000 | 10,001-15,000 | 15,001-50,000 | 50,001 and over. | Total. |
|---|---|---|---|---|---|---|---|---|
| $300- 399 | 11 | 16 | 8 | 7 | 1 | 4 | 4 | 51 |
| 400- 499 | 29 | 23 | 20 | 4 | 6 | 6 | 5 | 93 |
| 500- 599 | 139 | 120 | 67 | 15 | 18 | 13 | 9 | 381 |
| 600- 699 | 329 | 357 | 153 | 96 | 87 | 66 | 22 | 1,110 |
| 700- 799 | 269 | 428 | 308 | 207 | 185 | 182 | 30 | 1,609 |
| 800- 899 | 139 | 271 | 190 | 205 | 168 | 343 | 72 | 1,388 |
| 900- 999 | 78 | 126 | 119 | 143 | 185 | 393 | 137 | 1,181 |
| 1,000- 1,099 | 38 | 92 | 80 | 84 | 120 | 242 | 213 | 869 |
| 1,100- 1,199 | 27 | 41 | 40 | 55 | 69 | 138 | 199 | 569 |
| 1,200- 1,299 | 23 | 49 | 39 | 44 | 47 | 149 | 242 | 593 |
| 1,300- 1,399 | 12 | 39 | 9 | 19 | 22 | 93 | 248 | 442 |
| 1,400- 1,499 | 22 | 9 | 13 | 14 | 22 | 48 | 206 | 334 |
| 1,500- 1,599 | 9 | 8 | 13 | 8 | 13 | 50 | 223 | 324 |
| 1,600- 1,699 | 4 | 1 | 5 | 5 | 3 | 21 | 195 | 234 |
| 1,700- 1,799 | 4 | 2 | 3 | 1 | 3 | 13 | 108 | 134 |
| 1,800- 1,899 | 3 | 4 | 4 | 1 | 0 | 10 | 97 | 119 |
| 1,900- 1,999 | 0 | 0 | 1 | 0 | 0 | 1 | 54 | 56 |
| 2,000- 2,099 | 1 | 3 | ...... | 1 | 2 | 1 | 61 | 69 |
| 2,100- 2,199 | 0 | 1 | ...... | ...... | 2 | 2 | 41 | 46 |
| 2,200- 2,299 | 1 | 0 | ...... | ...... | ...... | 2 | 25 | 28 |
| 2,300- 2,399 | ...... | 0 | ...... | ...... | ...... | 0 | 27 | 27 |
| 2,400- 2,499 | ...... | 0 | ...... | ...... | ...... | 0 | 15 | 15 |
| 2,500- 2,599 | ...... | 0 | ...... | ...... | ...... | 1 | 9 | 10 |
| 2,600- 2,699 | ...... | 0 | ...... | ...... | ...... | 0 | 17 | 17 |
| 2,700- 2,799 | ...... | 0 | ...... | ...... | ...... | 0 | 5 | 5 |
| 2,800- 2,899 | ...... | 0 | ...... | ...... | ...... | 1 | 1 | 2 |
| 2,900- 2,999 | ...... | 0 | ...... | ...... | ...... | ...... | 0 | 0 |
| 3,000- 3,099 | ...... | 1 | ...... | ...... | ...... | ...... | 3 | 4 |
| Above | ...... | 1 | ...... | ...... | ...... | ...... | ...... | 1 |
| Total | 1,138 | 1,592 | 1,072 | 909 | 953 | 1,779 | 2,268 | 9,711 |
| Median | 723 | 765 | 793 | 861 | 906 | 970 | 1,381 | 919 |

The difference between the new teachers and the old teachers in this matter of college graduation and pedagogic training does not seem to be consistently in favor of either one group or the other. In some States the new teachers seem to exhibit better preparation than the old teachers, while in about as many States the reverse is true. So the evidence here does not seem to point toward an improvement of the teaching staff. Of course it must be kept in mind that only 23.3 per cent of these new teachers are inexperienced and that a great many of the others are simply new to the schools in which they are teaching and not new to the schools of the association.

Table XII, based upon population, is in its organization identical in form with the previous tables, and consequently is read in the same way.

That there is less changing of teachers from year to year in the large cities than in the small cities is very clearly set forth by the table, for the percentage of new teachers decreases from 39.6 per cent in the cities with population of 2,500 and under to 13.3 per cent in cities of over 50,000 population, and it should be noticed that the decrease is especially pronounced as we proceed from the cities with a population of 10,000 to the still larger cities. This comparative stability in the teaching force of the large cities is doubtless due to the fact that salaries are higher and the positions consequently more desirable.

In regard to the percentage of the new teachers who are inexperienced, we find the evidence still favoring the large cities. Again, with the exception of the percentage for cities with populations between 7,500 and 10,000, there is a more or less steady decrease from 30.7 per cent in the group of smallest cities to 9.7 per cent in the largest cities.

In figure 10 an attempt is made to bring out the relation between population, on the one hand, and the percentage of new teachers and the percentage of the new teachers who are inexperienced, on the other. The entire bar represents the percentage of new teachers and the first section of the bar, the percentage of the new teachers who are inexperienced. The graph brings out very clearly the fact that the large cities are able in a large measure to select and to hold their teachers.

From Table XII it would seem that there is little or no relation between population and the percentage of college graduates among the teachers or between population and the percentage of teachers with special pedagogic preparation.

## SALARIES.

The efficiency of a school system depends very largely on the character of its teachers, and the character of the teachers is determined to a great extent by the salaries which that system is able to offer. That school which is able to pay the largest salaries to its teachers will, other things being equal, have the best instructorial staff. Furthermore, the teaching profession itself will be able to compete with the other professions in securing the best talent of the country only when the compensation for teaching, other things being equal, at least approach those of the other professions. Of course, the "other things" are very seldom equal.

*Salaries of teachers.*—Concerning salary of teachers we have reports involving 9,711 teachers. Table XIII is based upon these reports. In this table the material has been analyzed on the basis of both State and population. Consequently it has two parts. It should be read as follows: Of the 358 teachers reported from Colorado, 3 were receiving a salary somewhere between $500 and $599, inclusive, 23 between $600 and $699, etc., and the median salary for Colorado is $1,032.

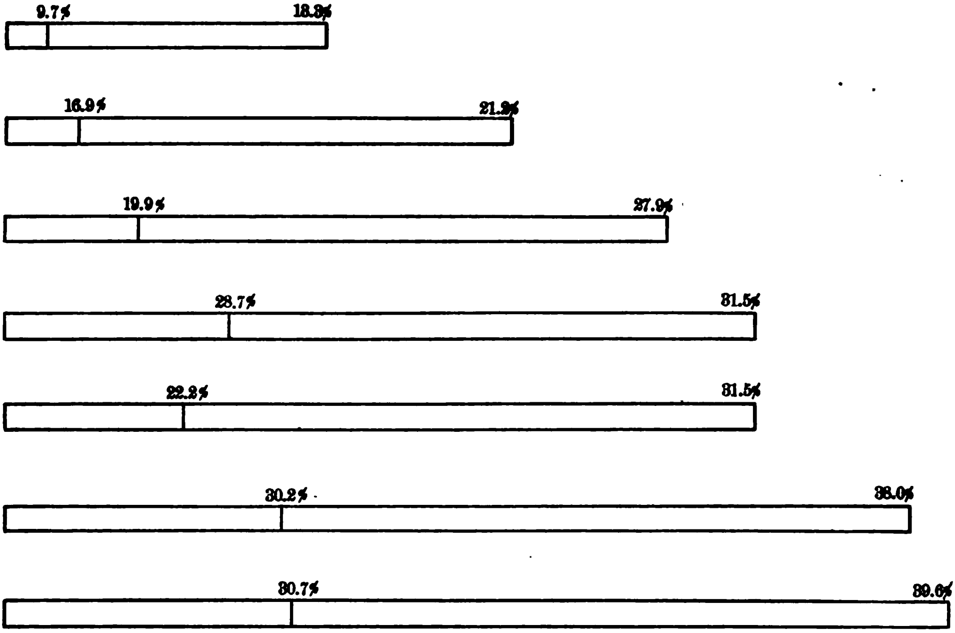

FIG. 10.—Showing the percentage of new teachers and the percentage of new teachers who are inexperienced in cities having a population, respectively (reading from the top), of over 50,000, 15,001–50,000, 10,001–15,000, 7,501–10,000, 5,001–7,500, 2,501–5,000, under 2,500. The entire bar represents the percentage of the total number of teachers who are new to the school systems in which they are teaching. The first section of the bar represents the percentage of the new teachers who are inexperienced. For instance, in the group of cities having population of 2,500 or less, 39.6 per cent of the total number of teachers are new teachers, and 30.7 per cent of these new teachers are inexperienced.

It is very interesting to note the variation in salary from State to State. The median salary varies from $752 in Nebraska to $1,238 in Montana. There are four States geographically contiguous in which the median falls below $800, Nebraska, Iowa, Kansas, and Oklahoma, and five States in which the median is above $1,000, Montana, Missouri, Illinois, Colorado, and Ohio. It should be observed that in every State the median salary is much nearer to the smallest salary paid than it is to the largest.

There is a direct correlation between the size of city and the size of salary paid, as is made clear in the table. The median increases from $723 for schools located in cities under 2,500 to $1,381 for those in cities of over 50,000 population, but it should be noted that this increase is not equally distributed among the several groups of cities. The median for the group of cities second largest in size is only $970, while the median for the largest cities is $1,381. Thus it seems that the cities having populations of over 50,000 are in a class by themselves.

The relation between the size of city and the salary of teachers may be better understood by reference to figure 11, in which four curves have been drawn representing the salaries of teachers for four groups of cities: Those with population of less than 2,500, those with population between 7,501 and 10,000, those between 15,001 and 50,000, and those over 50,000. The following points are made clear: First, the range of salaries increases with the size of city; second, the mode, or most frequent salary, becomes less pronounced as the size of city increases; and, third, both of these features are so accentuated in the cities having populations of over 50,000 that this group of cities stands out distinctly from the other groups.

TABLE XIV.

| Total salary of principals. | Colorado. | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. |
|---|---|---|---|---|---|---|---|---|
| $500-$599 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 |
| 600- 699 | ...... | ...... | ...... | ...... | ...... | 1 | ...... | 0 |
| 700- 799 | ...... | ...... | 1 | 2 | ...... | 1 | 1 | 4 |
| 800- 899 | ...... | 2 | 0 | 4 | 3 | 3 | 5 | 1 |
| 900- 999 | 1 | 4 | 4 | 11 | 8 | 8 | 9 | 4 |
| 1,000-1,099 | 4 | 12 | 2 | 7 | 11 | 5 | 6 | 6 |
| 1,100-1,199 | 2 | 1 | 2 | 6 | 2 | 7 | 6 | 1 |
| 1,200-1,299 | 3 | 9 | 7 | 3 | 9 | 15 | 5 | 4 |
| 1,300-1,399 | 1 | 7 | 2 | 2 | 9 | 8 | 2 | 2 |
| 1,400-1,499 | 2 | 4 | 2 | 1 | 2 | 4 | 4 | 2 |
| 1,500-1,599 | 1 | 6 | 3 | 3 | 5 | 10 | 2 | 3 |
| 1,600-1,699 | 4 | 5 | 3 | 1 | 6 | 3 | 1 | 1 |
| 1,700-1,799 | 3 | 3 | 2 | 1 | 4 | 4 | 2 | 0 |
| 1,800-1,899 | 1 | 4 | 1 | 2 | 2 | 3 | 2 | 0 |
| 1,900-1,999 | 0 | 6 | 1 | 3 | 0 | 1 | 0 | 0 |
| 2,000-2,099 | 0 | 4 | 2 | 2 | 1 | 2 | 1 | 2 |
| 2,100-2,199 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 |
| 2,200-2,299 | 1 | 5 | 0 | 0 | ...... | 5 | 0 | 0 |
| 2,300-2,399 | 1 | 2 | 0 | 0 | ...... | 1 | 0 | 0 |
| 2,400-2,499 | 0 | 0 | 0 | 1 | ...... | 0 | 0 | 0 |
| 2,500-2,599 | 3 | 6 | 2 | 2 | ...... | 0 | 0 | 1 |
| 2,600-2,699 | ...... | 3 | 0 | 0 | ...... | 1 | 0 | 0 |
| 2,700-2,799 | ...... | 2 | 0 | 1 | ...... | 0 | 0 | 0 |
| 2,800-2,899 | ...... | 1 | 0 | ...... | ...... | 1 | 0 | 0 |
| 2,900-2,999 | ...... | 0 | 0 | ...... | ...... | ...... | 0 | 0 |
| 3,000-3,099 | ...... | 3 | 1 | ...... | ...... | ...... | 5 | 2 |
| Above $3,100 | ...... | 19 | 1 | ...... | ...... | ...... | ...... | 5 |
| Total | 27 | 108 | 36 | 53 | 63 | 84 | 52 | 39 |
| Median | 1,550 | 1,825 | 1,400 | 1,142 | 1,283 | 1,325 | 1,183 | 1,263 |

| Total salary of teachers. | $300–$399 | 499 | 599 | 699 | 799 | 899 | 999 | 1099 | 1199 | 1299 | 1399 | 1499 | 1599 | 1699 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Per cent of teachers under 2,500 | 1.0 | 1.7 | 12.3 | 29.3 | 23.8 | 12.1 | 6.8 | 3.4 | 2.4 | 2.1 | 1.0 | 2.0 | 0.8 | 0.4 |
| 7,501–10,000 | .8 | .4 | 1.7 | 10.6 | 22.8 | 22.5 | 15.7 | 9.2 | 6.1 | 4.8 | 2.1 | 1.5 | .9 | .6 |
| 15,001–50,000 | .3 | .4 | .7 | 3.7 | 10.2 | 19.3 | 22.0 | 13.6 | 7.8 | 8.4 | 5.2 | 2.7 | 2.8 | 1.2 |
| Above 50,000 | .2 | .2 | .4 | 1.0 | 1.3 | 3.2 | 6.1 | 9.4 | 8.8 | 10.7 | 11.0 | 9.1 | 9.8 | 8.5 |

| Total salary of teachers. | $1799 | 1899 | 1999 | 2099 | 2199 | 2299 | 2399 | 2499 | 2599 | 2699 | 2799 | 2899 | 2999 | 3099 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Per cent of teachers under 2,500 | 0.4 | 0.3 | 0 | 0.1 | 0 | 0.1 | .... | .... | .... | .... | .... | .... | .... | .... |
| 7,501–10,000 | .1 | .1 | 0 | .1 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| 15,001–50,000 | .7 | .6 | 0.05 | .05 | 0.1 | .1 | 0 | 0 | 0.05 | 0 | 0 | .05 | .... | .... |
| Above 50,000 | 4.7 | 4.3 | 2.4 | 2.6 | 1.7 | 1.1 | 1.2 | 0.7 | .4 | 0.8 | .2 | 0.05 | 0 | 1.5 |

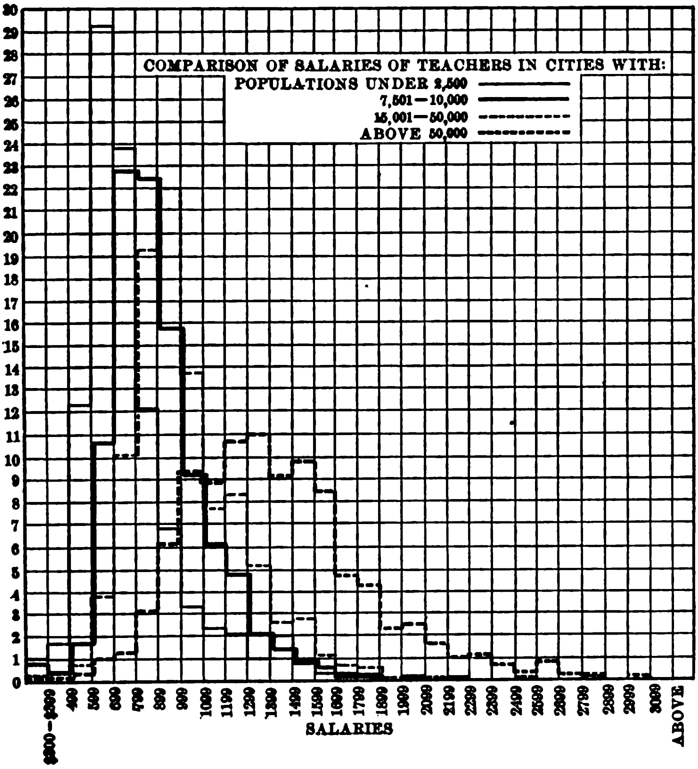

FIG. 11.—Salaries of teachers in different groups of cities.

TABLE XIV—Continued.

| Total salary of principals. | Montana. | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. | Total. |
|---|---|---|---|---|---|---|---|---|
| $500-$599 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 |
| 600- 699 | ...... | 1 | ...... | 2 | ...... | ...... | ...... | 4 |
| 700- 799 | ...... | 5 | 1 | 2 | ...... | ...... | ...... | 17 |
| 800- 899 | ...... | 2 | 2 | 9 | ...... | 3 | ...... | 34 |
| 900- 999 | ...... | 11 | 3 | 7 | ...... | 0 | 4 | 74 |
| 1,000-1,099 | 1 | 5 | 4 | 13 | 1 | 2 | 2 | 81 |
| 1,100-1,199 | 1 | 3 | 1 | 16 | 2 | 1 | 1 | 52 |
| 1,200-1,299 | 1 | 5 | 9 | 14 | 2 | 3 | 1 | 90 |
| 1,300-1,399 | 0 | 2 | 1 | 8 | 2 | 1 | 5 | 52 |
| 1,400-1,499 | 0 | 1 | 1 | 9 | 1 | 0 | 6 | 39 |
| 1,500-1,599 | 1 | 3 | 2 | 6 | 1 | 3 | 7 | 56 |
| 1,600-1,699 | 0 | 0 | 0 | 5 | 0 | 1 | 7 | 37 |
| 1,700-1,799 | 0 | 0 | 0 | 1 | 0 | 0 | 9 | 29 |
| 1,800-1,899 | 1 | 1 | 1 | 6 | 1 | 1 | 7 | 33 |
| 1,900-1,999 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 14 |
| 2,000-2,099 | 1 | 0 | 1 | 4 | 0 | 0 | 6 | 26 |
| 2,100-2,199 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 7 |
| 2,200-2,299 | 2 | 0 | 0 | 3 | 1 | 1 | 2 | 20 |
| 2,300-2,399 | 0 | 0 | 0 | 0 | 0 | ...... | 1 | 5 |
| 2,400-2,499 | 0 | 1 | 0 | 2 | 2 | ...... | 1 | 7 |
| 2,500-2,500 | 1 | ...... | 1 | 5 | ...... | ...... | 3 | 24 |
| 2,600-2,699 | 1 | ...... | ...... | 0 | ...... | ...... | 0 | 5 |
| 2,700-2,799 | 1 | ...... | ...... | 0 | ...... | ...... | 0 | 4 |
| 2,800-2,899 | ...... | ...... | ...... | 3 | ...... | ...... | 2 | 7 |
| 2,900-2,999 | ...... | ...... | ...... | 1 | ...... | ...... | ...... | 1 |
| 3,000-3,099 | ...... | ...... | ...... | 8 | ...... | ...... | ...... | 19 |
| Above $3,100 | ...... | ...... | ...... | 3 | ...... | ...... | ...... | 28 |
| Total | 11 | 40 | 27 | 127 | 13 | 16 | 70 | 766 |
| Median | 2,050 | 1,020 | 1,228 | 1,306 | 1,375 | 1,266 | 1,722 | 1,358 |

| Total salary of principals. | Under 2,500 | 2,501-5,000 | 5,001-7,500 | 7,501-10,000 | 10,001-15,000 | 15,001-50,000 | 50,001 and over. | Total. |
|---|---|---|---|---|---|---|---|---|
| $500-$599 | ...... | ...... | ...... | 1 | ...... | ...... | ...... | 1 |
| 600- 699 | 3 | 1 | ...... | 0 | ...... | ...... | ...... | 4 |
| 700- 799 | 14 | 3 | ...... | 0 | ...... | ...... | ...... | 17 |
| 800- 899 | 21 | 12 | 1 | 0 | ...... | ...... | ...... | 34 |
| 900- 999 | 34 | 34 | 3 | 1 | ...... | 2 | ...... | 74 |
| 1,000-1,099 | 24 | 39 | 16 | 2 | ...... | 0 | ...... | 81 |
| 1,100-1,199 | 7 | 29 | 11 | 2 | 3 | 0 | ...... | 52 |
| 1,200-1,299 | 17 | 25 | 26 | 12 | 8 | 1 | 1 | 90 |
| 1,300-1,399 | 11 | 7 | 14 | 12 | 5 | 3 | 0 | 52 |
| 1,400-1,499 | 9 | 4 | 6 | 10 | 6 | 3 | 1 | 39 |
| 1,500-1,599 | 10 | 12 | 3 | 11 | 12 | 5 | 3 | 56 |
| 1,600-1,699 | 6 | 7 | 4 | 3 | 10 | 6 | 1 | 37 |
| 1,700-1,799 | 5 | 6 | 6 | 2 | 1 | 7 | 2 | 29 |
| 1,800-1,899 | 3 | 5 | 2 | 5 | 7 | 9 | 2 | 33 |
| 1,900-1,999 | 3 | 3 | 2 | 1 | 1 | 4 | 0 | 14 |
| 2,000-2,099 | 0 | 2 | 5 | 2 | 4 | 10 | 3 | 26 |
| 2,100-2,199 | 1 | 0 | 1 | 0 | 1 | 3 | 1 | 7 |
| 2,200-2,299 | 0 | 3 | 0 | 1 | 3 | 8 | 5 | 20 |
| 2,300-2,399 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 5 |
| 2,400-2,499 | 1 | 0 | 0 | 0 | 1 | 2 | 3 | 7 |
| 2,500-2,599 | 1 | 3 | 8 | 0 | 0 | 7 | 5 | 24 |
| 2,600-2,699 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 5 |
| 2,700-2,799 | 0 | 1 | 0 | 0 | 1 | 2 | 0 | 4 |
| 2,800-2,899 | 0 | 2 | 0 | 0 | 0 | 0 | 5 | 7 |
| 2,900-2,999 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 3,000-3,099 | 2 | 2 | ...... | 1 | 0 | 0 | 14 | 19 |
| Above $3,100 | ...... | ...... | ...... | ...... | 1 | 5 | 22 | 28 |
| Total | 172 | 201 | 110 | 69 | 65 | 81 | 68 | 766 |
| Median | 1,058 | 1,140 | 1,292 | 1,445 | 1,587 | 2,005 | 3,014 | 1,358 |

### TABLE XV.

| Total salary of superintendents. | Colorado. | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. |
|---|---|---|---|---|---|---|---|---|
| $1,000-$1,099 | ........ | 1 | ........ | ........ | ........ | ........ | ........ | ........ |
| 1,100- 1,199 | ........ | 0 | ........ | ........ | ........ | ........ | 1 | ........ |
| 1,200- 1,299 | ........ | 0 | ........ | ........ | ........ | ........ | 1 | 1 |
| 1,300- 1,399 | 1 | 3 | ........ | ........ | 6 | 4 | 0 | 3 |
| 1,400- 1,499 | 0 | 1 | 1 | 5 | 5 | 2 | 1 | 4 |
| 1,500- 1,599 | 0 | 0 | 1 | 5 | 4 | 4 | 2 | 4 |
| 1,600- 1,699 | 4 | 2 | 2 | 3 | 9 | 3 | 4 | 0 |
| 1,700- 1,799 | 2 | 3 | 1 | 1 | 2 | 2 | 2 | 0 |
| 1,800- 1,899 | 0 | 5 | 2 | 4 | 2 | 7 | 7 | 3 |
| 1,900- 1,999 | 1 | 3 | 0 | 1 | 5 | 2 | 5 | 0 |
| 2,000- 2,099 | 2 | 2 | 1 | 1 | 6 | 0 | 3 | 1 |
| 2,100- 2,199 | 1 | 6 | 0 | 0 | 0 | 1 | 2 | 1 |
| 2,200- 2,299 | 0 | 3 | 0 | 0 | 2 | 2 | 2 | 1 |
| 2,300- 2,399 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| 2,400- 2,499 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 2,500- 2,599 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 1 |
| 2,600- 2,699 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | ........ |
| 2,700- 2,799 | 0 | 2 | 0 | 0 | 1 | 0 | 1 | ........ |
| 2,800- 2,899 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | ........ |
| 2,900- 2,999 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | ........ |
| 3,000- 3,099 | 0 | 2 | 0 | 1 | 0 | 2 | 1 | ........ |
| Above | 3 | 1 | 1 | ........ | 1 | 2 | 1 | ........ |
| Total | 15 | 35 | 11 | 23 | 45 | 38 | 35 | 20 |
| Median | 1,950 | 1,983 | 1,825 | 1,650 | 1,694 | 1,857 | 1,893 | 1,550 |

| Total salary of superintendents. | Montana. | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. | Total. |
|---|---|---|---|---|---|---|---|---|
| $1,000-$1,099 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 1 |
| 1,100- 1,199 | ........ | 1 | ........ | 1 | ........ | ........ | ........ | 3 |
| 1,200- 1,299 | ........ | 2 | ........ | 0 | ........ | ........ | ........ | 4 |
| 1,300- 1,399 | ........ | 2 | 1 | 5 | ........ | 1 | ........ | 26 |
| 1,400- 1,499 | ........ | 1 | 1 | 5 | ........ | 0 | ........ | 26 |
| 1,500- 1,599 | ........ | 3 | 1 | 6 | ........ | 1 | 1 | 32 |
| 1,600- 1,699 | ........ | 4 | 5 | 2 | ........ | 1 | 1 | 40 |
| 1,700- 1,799 | ........ | 2 | 2 | 4 | ........ | 1 | 4 | 26 |
| 1,800- 1,899 | ........ | 5 | 3 | 6 | 1 | 1 | 4 | 50 |
| 1,900- 1,999 | ........ | 1 | 1 | 1 | 0 | 1 | 1 | 22 |
| 2,000- 2,099 | 2 | 0 | 2 | 2 | 0 | 1 | 2 | 25 |
| 2,100- 2,199 | 0 | 1 | 1 | 0 | 0 | ........ | 2 | 15 |
| 2,200- 2,299 | 1 | 1 | 1 | 2 | 1 | ........ | 1 | 17 |
| 2,300- 2,399 | 0 | ........ | 0 | 0 | 0 | ........ | 0 | 3 |
| 2,400- 2,499 | 0 | ........ | 0 | 0 | 0 | ........ | 0 | 4 |
| 2,500- 2,599 | 0 | ........ | 0 | 2 | 0 | ........ | 0 | 8 |
| 2,600- 2,699 | 0 | ........ | 0 | 1 | 0 | ........ | 0 | 4 |
| 2,700- 2,799 | 0 | ........ | 0 | 1 | 0 | ........ | 1 | 6 |
| 2,800- 2,899 | 1 | ........ | 0 | 1 | 0 | ........ | ........ | 4 |
| 2,900- 2,999 | 0 | ........ | 0 | 0 | 0 | ........ | ........ | 1 |
| 3,000- 3,099 | 0 | ........ | 0 | 0 | 0 | ........ | ........ | 6 |
| Above | 1 | ........ | 1 | 1 | 2 | ........ | ........ | 14 |
| Total | 5 | 23 | 19 | 40 | 4 | 7 | 17 | 337 |
| Median | 2,250 | 1,663 | 1,775 | 1,725 | 2,700 | 1,750 | 1,863 | 1,821 |

TABLE XV—Continued.

| Total salary of superintendents. | Under 2,500. | 2,501-5,000 | 5,001-7,500 | 7,501-10,000 | 10,001-15,000 | 15,001-50,000 | 50,001-and over. | Total. |
|---|---|---|---|---|---|---|---|---|
| $1,000-$1,099 | ........ | 1 | ........ | ........ | ........ | ........ | ........ | 1 |
| 1,100- 1,199 | 1 | 2 | ........ | ........ | ........ | ........ | ........ | 3 |
| 1,200- 1,299 | 3 | 1 | ........ | ........ | ........ | ........ | ........ | 4 |
| 1,300- 1,399 | 14 | 8 | 3 | 1 | ........ | ........ | ........ | 26 |
| 1,400- 1,499 | 18 | 7 | 0 | 1 | ........ | ........ | ........ | 26 |
| 1,500- 1,599 | 16 | 12 | 2 | 2 | ........ | ........ | ........ | 32 |
| 1,600- 1,699 | 23 | 11 | 3 | 1 | ........ | 1 | 1 | 40 |
| 1,700- 1,799 | 8 | 16 | 1 | 0 | ........ | 1 | 0 | 26 |
| 1,800- 1,899 | 19 | 15 | 10 | 4 | ........ | 1 | 1 | 50 |
| 1,900- 1,999 | 5 | 6 | 5 | 4 | 2 | 0 | 0 | 22 |
| 2,000- 2,099 | 2 | 12 | 6 | 3 | 1 | 1 | 0 | 25 |
| 2,100- 2,199 | 3 | 3 | 5 | 1 | 2 | 1 | 0 | 15 |
| 2,200- 2,299 | 2 | 2 | 2 | 4 | 5 | 1 | 1 | 17 |
| 2,300- 2,399 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 3 |
| 2,400- 2,499 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 4 |
| 2,500- 2,599 | 1 | 0 | 1 | 3 | 0 | 3 | 0 | 8 |
| 2,600- 2,699 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 4 |
| 2,700- 2,799 | 0 | 1 | 0 | 0 | 2 | 3 | 0 | 6 |
| 2,800- 2,899 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 4 |
| 2,900- 2,999 | 0 | 0 | 0 | ........ | 0 | 1 | 0 | 1 |
| 3,000- 3,099 | 1 | 2 | 1 | ........ | 0 | 2 | 0 | 6 |
| Above | ........ | 1 | 2 | ........ | 2 | 6 | 3 | 14 |
| Total | 117 | 100 | 43 | 26 | 19 | 26 | 6 | 337 |
| Median | 1,628 | 1,750 | 1,950 | 2,000 | 2,290 | 2,700 | 2,700 | 1,821 |

*Salaries of principals.*—Table XIV, based upon reports concerning the salaries of 766 principals, is similar in form and organization to the immediately preceding table and is consequently read in the same way. It therefore needs no further explanation.

Here again we find Nebraska footing the list with a median salary for principals of only $1,020 and Montana leading with a median salary of $2,050, more than twice that of Nebraska. There are three States, Nebraska, Iowa, and Minnesota, with medians of less than $1,200, and four, Montana, Illinois, Wisconsin, and Colorado, with medians of more than $1,500.

The size of city has the same effect on the salaries of principals as upon salaries of teachers, except that in the former case it is more pronounced. We see the median increasing from $1,058 in the smallest cities to $3,014 in the largest. Here, too, the line is sharply drawn between the cities of over 50,000 population and all the other groups.

*Salaries of superintendents.*—The value of Table XV, which has to do with the salaries of superintendents, is somewhat less than that of Tables XIII and XIV because it represents only 337 cases. The reports from the larger cities were very few, consequently the part of the table referring to these cities is without value.

The table will be understood if read in the same way as the two preceding tables.

Among the States the median varies from $1,550 for Missouri to $2,700 for Oklahoma, but owing to the poor representation of these two States these figures should not be taken too seriously.

The positive correlation between salaries and size of cities continues, although for cities of over 50,000 inhabitants the median salary for superintendents is $2,700, whereas we discovered the median salary for principals to be $3,014 for the same group of cities. That this is due to the fact that only six cases are reported is borne out by the findings of Jessup and Coffman in their investigation of last year.

TABLE XVI.

| | Colorado. | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. |
|---|---|---|---|---|---|---|---|---|
| Median salary for teachers | $1,032 | $1,103 | $906 | $768 | $797 | $874 | $960 | $1,120 |
| Median salary for principals | 1,550 | 1,825 | 1,400 | 1,142 | 1,283 | 1,325 | 1,183 | 1,263 |
| Median salary for superintendents | 1,950 | 1,983 | 1,825 | 1,650 | 1,694 | 1,857 | 1,893 | 1,550 |

| | Montana. | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. | Total. |
|---|---|---|---|---|---|---|---|---|
| Median salary for teachers | $1,238 | $752 | $853 | $1,008 | $797 | $868 | $828 | $919 |
| Median salary for principals | 2,050 | 1,020 | 1,228 | 1,306 | 1,375 | 1,266 | 1,722 | 1,358 |
| Median salary for superintendents | 2,250 | 1,663 | 1,775 | 1,725 | 2,700 | 1,750 | 1,863 | 1,821 |

| | Under 2,500. | 2,501–5,000. | 5,001–7,500. | 7,501–10,000. | 10,001–15,000. | 15,001–50,000. | 50,001 and over. | Total. |
|---|---|---|---|---|---|---|---|---|
| Median salary for teachers | $723 | $765 | $793 | $861 | $906 | $970 | $1,381 | $919 |
| Median salary for principals | 1,058 | 1,140 | 1,292 | 1,445 | 1,587 | 2,005 | 3,014 | 1,358 |
| Median salary for superintendents | 1,628 | 1,750 | 1,950 | 2,000 | 2,290 | 2,700 | 2,700 | 1,821 |

*Comparison of salaries of teachers, principals, and superintendents.*—In figure 12 we have a comparison of the salaries of teachers, principals, and superintendents. The height of any particular curve at any point represents the per cent of cases, or frequency, and the distance along the horizontal line, the salary.

A number of interesting points are brought out in this figure besides the somewhat general comparison which is seen at a glance. The curves representing the teachers and the principals, especially the one representing the teachers, are skewed toward the lower end of the scale. This is occasioned by the fact that, while a few individuals in each case may expect high salaries, the great majority must be content to receive rather mediocre salaries, much nearer the lower than the upper extreme. Another fact that comes out is that there is greater uniformity in the salaries of teachers than in the salaries of either the principals or the superintendents. Still another fact that should receive attention is indicated by the irregularity of the principals' and superintendents' curves. Let us examine the principals' curve, since it shows the irregularity most markedly. It will be observed that the frequent salaries are $1,000, $1,200, $1,500, $1,800, $2,000, $2,200, $2,500, $2,800, and $3,000. This

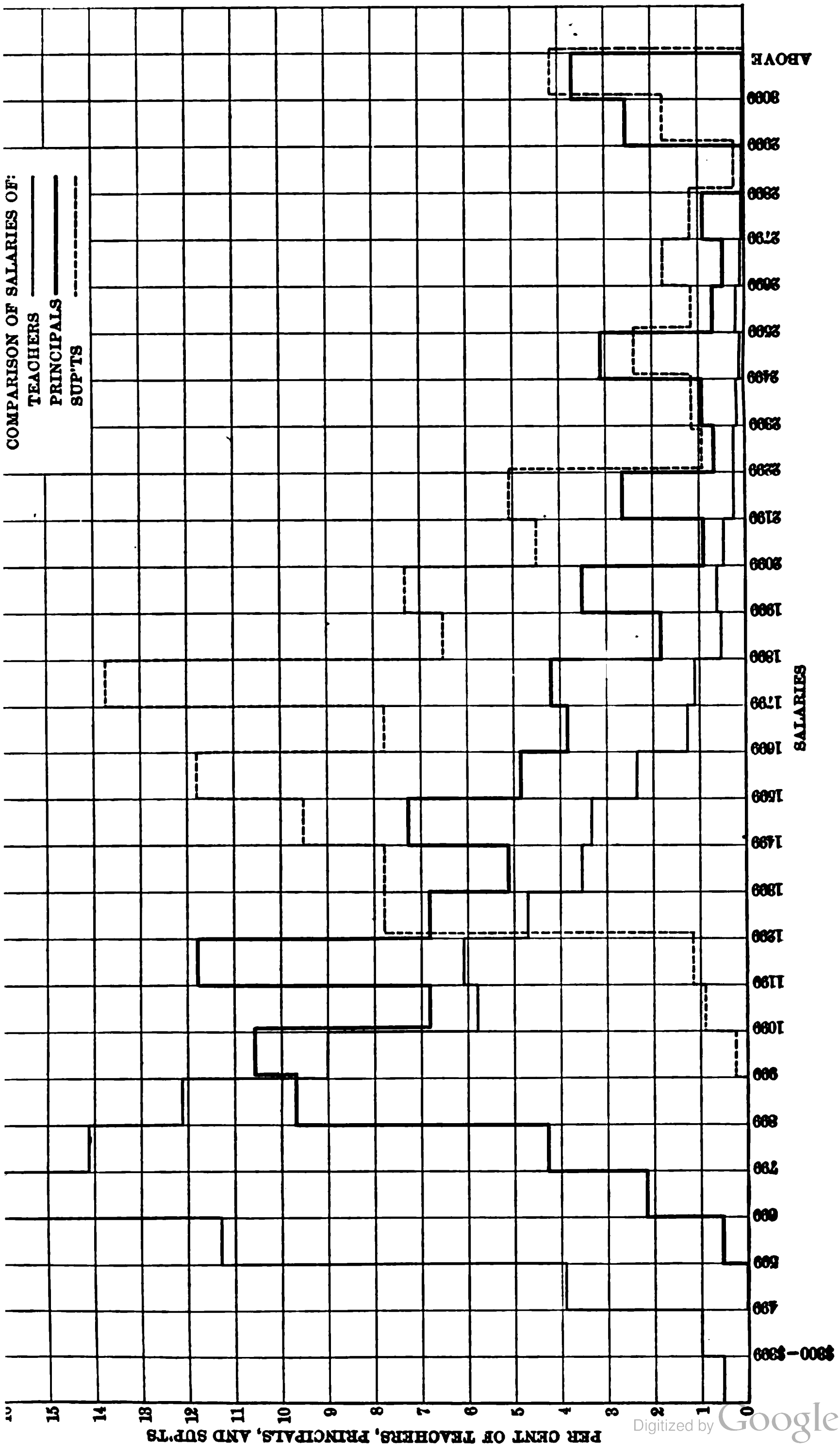

FIG. 12.—Salaries of teachers, principals, and superintendents compared.

must indicate that the salaries of principals and superintendents are not determined entirely by the merit of the individuals, or the curve would show no such preference for certain salaries, for merit surely does not vary in any such fashion. It would seem, therefore, that in many cases a principal or superintendent is given a salary of $2,500 not because he merits it, but because $2,500 is a rather convenient number, easily handled, familiar to everyone, and because it occupies a certain place in our number series. On the other hand, $1,900, $2,100, $2,300, $2,700, $2,900, and others seem to be avoided on their own account rather than on the merits or demerits of the individual principals and superintendents.

Table XVI is simply a convenient table for comparing the medians in Tables XIII, XIV, and XV, and needs no further explanation.

The bar diagrams in figure 13 were devised for comparing the median salaries of teachers, principals, and superintendents within each group of cities as well as from group to group. In each bar the first section represents the median salary of teachers for the particular group of cities concerned, the first and second sections the median salary of principals, and the first, second, and third sections the median salary of superintendents. The bar representing the cities of over 50,000 inhabitants has but two sections, because the superintendents have only six cases in this group, not enough to warrant any conclusions.

An interesting as well as significant fact that is made very clear is that the salaries of principals increase with the increase in the size of cities much more rapidly than do the salaries of teachers; and the salaries of superintendents increase in about the same fashion as the salaries of principals. These facts would indicate that the need for efficient administrators and supervisors becomes increasingly apparent as the city increases in size, while there is no corresponding change in the demands on classroom teachers. Indeed, in the smaller schools, as will be brought out later, the principal is little more than an instructor and the superintendent frequently teaches a number of classes. Thus the character of work demanded of the principal and the superintendent changes and becomes of more vital importance to the school as the school becomes larger, while the work of the teacher changes but comparatively little.

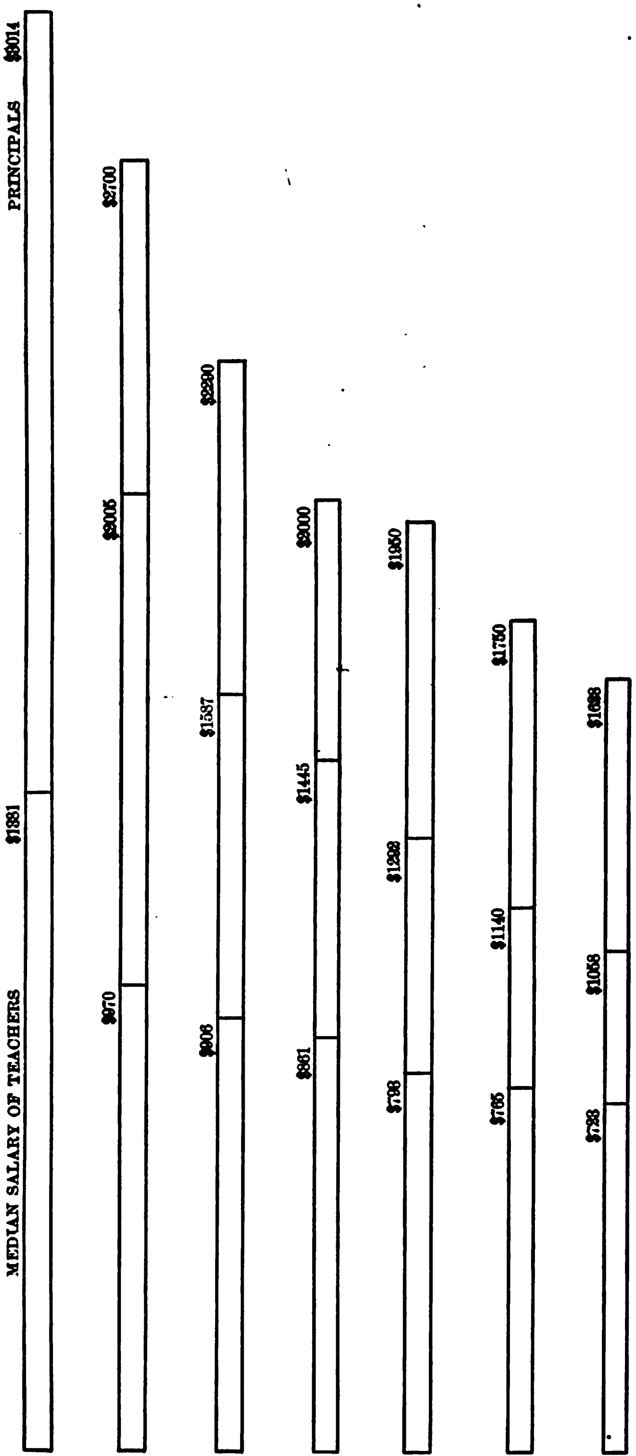

FIG. 13.—The first section of each bar represents the median salary of teachers, the first and second the median salary of principals, and the first, second, and third the median salary of superintendents.

TABLE XVII.

| | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. |
|---|---|---|---|---|---|---|---|
| Number of periods taught by superintendent: | | | | | | | |
| 0 | 108 | 48 | 29 | 40 | 63 | 46 | 32 |
| 1 | 15 | 7 | 19 | 6 | 16 | 14 | 7 |
| 2 | 14 | 7 | 15 | 16 | 10 | 7 | 4 |
| 3 | 3 | 1 | 1 | 9 | 7 | 3 | 8 |
| 4 | 2 | | | 2 | 2 | | |
| 5 | 1 | | | 1 | 1 | | |
| 6 | 1 | | | | | | |
| Total | 144 | 63 | 64 | 74 | 99 | 70 | 51 |
| Per cent of superintendents teaching— | | | | | | | |
| No period | 75.0 | 76.2 | 45.3 | 54.1 | 63.6 | 65.7 | 62.7 |
| 1 period | 10.4 | 11.1 | 29.7 | 8.1 | 16.2 | 20.0 | 13.8 |
| 2 periods | 9.7 | 11.1 | 23.4 | 21.6 | 10.1 | 10.0 | 7.8 |
| 3 periods | 2.1 | 1.6 | 1.6 | 12.2 | 7.1 | 4.3 | 15.7 |
| 4 periods | 1.4 | | | 2.7 | 2.0 | | |
| 5 periods | .7 | | | 1.3 | 1.0 | | |
| 6 periods | .7 | | | | | | |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

| | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. | Total. |
|---|---|---|---|---|---|---|---|
| Number of periods taught by superintendent: | | | | | | | |
| 0 | 19 | 9 | 96 | 14 | 8 | 61 | 573 |
| 1 | 11 | 7 | 31 | 2 | 2 | 18 | 155 |
| 2 | 10 | 6 | 18 | 1 | 5 | 9 | 122 |
| 3 | 8 | 4 | 5 | 0 | 2 | 1 | 52 |
| 4 | 2 | 2 | 2 | 1 | 1 | | 14 |
| 5 | | | 0 | | | | 3 |
| 6 | | | 1 | | | | 2 |
| Total | 50 | 28 | 153 | 18 | 18 | 89 | 921 |
| Per cent of superintendents teaching— | | | | | | | |
| No period | 38.0 | 32.1 | 62.8 | 77.7 | 44.5 | 68.5 | 62.3 |
| 1 period | 22.0 | 25.0 | 20.2 | 11.1 | 11.1 | 20.2 | 16.8 |
| 2 periods | 20.0 | 21.4 | 11.7 | 5.6 | 27.7 | 10.1 | 13.3 |
| 3 periods | 16.0 | 14.3 | 3.3 | 0 | 11.1 | 1.2 | 5.6 |
| 4 periods | 4.0 | 7.2 | 1.3 | 5.6 | 5.6 | | 1.5 |
| 5 periods | | | 0 | | | | .3 |
| 6 periods | | | .7 | | | | .2 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

| Population. | Under 2,500 | 2,501–5,000 | 5,001–7,500 | 7,501–10,000 | 10,001–15,000 | 15,001–50,000 | 50,001 and over. | Total. |
|---|---|---|---|---|---|---|---|---|
| Number of periods taught by superintendent: | | | | | | | | |
| 0 | 44 | 89 | 87 | 76 | 68 | 101 | 108 | 573 |
| 1 | 38 | 72 | 26 | 10 | 5 | 2 | 2 | 155 |
| 2 | 61 | 52 | 4 | 4 | 1 | | 0 | 122 |
| 3 | 37 | 12 | 3 | | | | 0 | 52 |
| 4 | 12 | 2 | | | | | 0 | 14 |
| 5 | 2 | 1 | | | | | 0 | 3 |
| 6 | | 1 | | | | | 1 | 2 |
| Total | 194 | 229 | 120 | 90 | 74 | 103 | 111 | 921 |
| Per cent of superintendents teaching— | | | | | | | | |
| No period | 22.7 | 38.9 | 72.5 | 84.4 | 91.9 | 98.1 | 97.3 | 62.3 |
| 1 period | 19.6 | 31.4 | 21.7 | 11.1 | 6.7 | 1.9 | 1.8 | 16.8 |
| 2 periods | 31.4 | 22.8 | 3.3 | 4.5 | 1.4 | | .0 | 13.3 |
| 3 periods | 19.1 | 5.2 | 2.5 | | | | .0 | 5.6 |
| 4 periods | 6.2 | .9 | | | | | .0 | 1.5 |
| 5 periods | 1.0 | .4 | | | | | 0 | .3 |
| 6 periods | | .4 | | | | | .9 | .2 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE XVII—Continued.

| Enrollment. | 1-100 | 101-200 | 201-300 | 301-500 | 501-1,000 | 1,001 and over. | Total. |
|---|---|---|---|---|---|---|---|
| Number of periods taught by superintendent: | | | | | | | |
| 0 | 46 | 140 | 121 | 142 | 78 | 46 | 573 |
| 1 | 17 | 93 | 35 | 9 | | 1 | 155 |
| 2 | 17 | 87 | 13 | 5 | | | 122 |
| 3 | 10 | 36 | 6 | | | | 52 |
| 4 | 5 | 9 | 0 | | | | 14 |
| 5 | 1 | 1 | 1 | | | | 3 |
| 6 | 1 | 1 | | | | | 2 |
| Total | 97 | 367 | 176 | 156 | 78 | 47 | 921 |
| Per cent of superintendents teaching— | | | | | | | |
| No period | 47.5 | 38.2 | 68.7 | 91.0 | 100.0 | 97.9 | 62.3 |
| 1 period | 17.5 | 25.2 | 19.9 | 5.8 | | 2.1 | 16.8 |
| 2 periods | 17.5 | 23.7 | 7.4 | 3.2 | | | 13.3 |
| 3 periods | 10.3 | 9.8 | 3.4 | | | | 5.6 |
| 4 periods | 5.2 | 2.5 | .0 | | | | 1.5 |
| 5 periods | 1.0 | .3 | .6 | | | | .3 |
| 6 periods | 1.0 | .3 | | | | | .2 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

### DISTRIBUTION OF WORK.

*Number of periods taught by superintendent.*—In Table XVII the attempt has been made to show the extent to which the superintendent is a teacher in the north central high schools. The table is based upon State, population, and enrollment and is composed of two parts, the one giving the actual number of cases and the other the percentages. It is to be read as follows: In Illinois 108 of the superintendents reported, or 75 per cent, do no teaching; 15, or 10.4 per cent, teach one period per day each, etc.

This table shows that 62.3 per cent, considerably over half, of the superintendents in the entire association do no teaching whatsoever, while only .2 per cent teach six periods daily. However, there is much variation from State to State in this particular. In North Dakota and Nebraska a larger percentage of the superintendents teach than in any of the other States; only 32.1 per cent in the former and 38 per cent in the latter are entirely free from teaching. On the other hand, in Oklahoma, Indiana, and Illinois we find 77.7 per cent, 76.2 per cent, and 75 per cent, respectively, of the superintendents doing no teaching. This variation is due at least in a measure to the variation in the size of the schools.

The size of the city in which a school is located and the enrollment of the school both seem to be factors in determining the amount of teaching done by a superintendent. In cities with populations of 15,000 or more and in schools of 300 enrollment and above the superintendent does practically no teaching. It is in the smaller cities and schools that this demand is made upon his time.

The important question to be considered in this connection is, how much supervision is needed. Evidently the time which a superintendent gives to teaching can not be used for supervision. In the smaller schools, since the supervisory aspect of the school is, while probably not less important, less extensive, a portion of the superintendent's time can be given over to teaching without lowering the efficiency of the school. However, it is doubtless true that in many cases supervision is sacrificed to teaching, owing to the lack of an adequate teaching force.

*Number of periods taught by principal.*—Table XVIII needs no explanation, since its form is exactly like that of Table XVII.

It is seen that the principal does a great deal more teaching than the superintendent, as is brought out by the fact that only 18.7 per cent of the principals do no teaching, as opposed to 62.3 per cent of the superintendents. As regards differences from State to State and effects of population and enrollment, the same points are brought out that were shown in the case of superintendents; so they need not be repeated here. Suffice it to say that the effect of enrollment is somewhat more pronounced than the effect of population, as evinced by the fact that the percentage of principals which teach in the larger schools is somewhat less than the percentage which teach in the larger cities. This shows that where the principal is left free to organize the school the size of the school regularly increases. The tables therefore present a strong argument for increase in supervision.

TABLE XVIII.

| | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. |
|---|---|---|---|---|---|---|---|
| Number of periods taught by principal: | | | | | | | |
| 0 | 33 | 8 | 11 | 7 | 10 | 10 | 14 |
| 1 | 26 | 8 | 5 | 2 | 10 | 2 | 5 |
| 2 | 20 | 14 | 11 | 14 | 13 | 9 | 3 |
| 3 | 17 | 10 | 13 | 10 | 24 | 14 | 4 |
| 4 | 19 | 12 | 20 | 18 | 17 | 19 | 12 |
| 5 | 21 | 11 | 4 | 20 | 20 | 16 | 8 |
| 6 | 8 | ......... | ......... | 3 | 5 | ......... | 5 |
| Total | 144 | 63 | 64 | 74 | 99 | 70 | 51 |
| Per cent of principals teaching: | | | | | | | |
| No periods | 22.9 | 12.7 | 17.2 | 9.5 | 10.1 | 14.3 | 27.4 |
| 1 period | 18.1 | 12.7 | 7.8 | 2.7 | 10.1 | 2.8 | 9.9 |
| 2 periods | 13.9 | 22.2 | 17.2 | 18.9 | 13.1 | 12.8 | 5.9 |
| 3 periods | 11.8 | 15.8 | 20.3 | 13.5 | 24.2 | 20.0 | 7.8 |
| 4 periods | 13.2 | 19.1 | 31.2 | 24.3 | 17.2 | 27.2 | 23.5 |
| 5 periods | 14.6 | 17.5 | 6.3 | 27.0 | 20.2 | 22.9 | 15.7 |
| 6 periods | 5.5 | ......... | ......... | 4.1 | 5.1 | ......... | 9.8 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

### TABLE XVIII—Continued.

| | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. | Total. |
|---|---|---|---|---|---|---|---|
| Number of periods taught by principal: | | | | | | | |
| 0 | 5 | 1 | 42 | 3 | 1 | 27 | 172 |
| 1 | 6 | 0 | 9 | 0 | 0 | 17 | 90 |
| 2 | 4 | 3 | 17 | 2 | 5 | 31 | 146 |
| 3 | 5 | 2 | 12 | 5 | 5 | 7 | 128 |
| 4 | 17 | 16 | 37 | 4 | 4 | 5 | 200 |
| 5 | 11 | 5 | 24 | 3 | 2 | 2 | 147 |
| 6 | 2 | 1 | 12 | 1 | 1 | ......... | 38 |
| Total | 50 | 28 | 153 | 18 | 18 | 89 | 921 |
| Per cent of principals teaching: | | | | | | | |
| No periods | 10.0 | 3.6 | 27.4 | 16.6 | 5.6 | 30.3 | 18.7 |
| 1 period | 12.0 | .0 | 5.9 | .0 | .0 | 19.0 | 9.8 |
| 2 periods | 8.0 | 10.8 | 11.1 | 11.2 | 27.7 | 34.9 | 15.8 |
| 3 periods | 10.0 | 7.2 | 7.8 | 27.7 | 27.7 | 7.9 | 13.9 |
| 4 periods | 34.0 | 57.0 | 24.2 | 22.2 | 22.2 | 5.6 | 21.7 |
| 5 periods | 22.0 | 17.8 | 15.8 | 16.7 | 11.2 | 2.3 | 16.0 |
| 6 periods | 4.0 | 3.6 | 7.8 | 5.6 | 5.6 | ......... | 4.1 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

| | Under 2,500. | 2,501–5,000. | 5,001–7,500. | 7,501–10,000. | 10,001–15,000. | 15,001–50,000. | 50,001 and over. | Total. |
|---|---|---|---|---|---|---|---|---|
| Number of periods taught by principal: | | | | | | | | |
| 0 | 10 | 13 | 15 | 12 | 9 | 41 | 72 | 172 |
| 1 | 2 | 11 | 9 | 9 | 12 | 27 | 20 | 90 |
| 2 | 18 | 30 | 17 | 21 | 28 | 26 | 6 | 146 |
| 3 | 13 | 41 | 27 | 21 | 15 | 6 | 5 | 128 |
| 4 | 67 | 63 | 37 | 20 | 7 | 2 | 4 | 200 |
| 5 | 67 | 55 | 13 | 7 | 2 | 0 | 3 | 147 |
| 6 | 17 | 16 | 2 | ....... | 1 | 1 | 1 | 38 |
| Total | 194 | 229 | 120 | 90 | 74 | 103 | 111 | 921 |
| Per cent of principals teaching: | | | | | | | | |
| No periods | 5.2 | 5.7 | 12.5 | 13.4 | 12.1 | 39.8 | 64.9 | 18.7 |
| 1 period | 1.0 | 4.8 | 7.5 | 10.0 | 16.2 | 26.2 | 18.0 | 9.8 |
| 2 periods | 9.3 | 13.1 | 14.2 | 23.3 | 37.8 | 25.2 | 5.4 | 15.8 |
| 3 periods | 6.7 | 17.9 | 22.5 | 23.3 | 20.3 | 5.8 | 4.5 | 13.9 |
| 4 periods | 34.5 | 27.5 | 30.8 | 22.2 | 9.5 | 2.0 | 3.6 | 21.7 |
| 5 periods | 34.5 | 24.0 | 10.8 | 7.8 | 2.7 | .0 | 2.7 | 16.0 |
| 6 periods | 8.8 | 7.0 | 1.7 | ......... | 1.4 | 1.0 | .9 | 4.1 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

| | 1–100. | 101–200. | 201–300. | 301–500. | 501–1,000. | 1,001 and over. | Total. |
|---|---|---|---|---|---|---|---|
| Number of periods taught by principal: | | | | | | | |
| 0 | 16 | 28 | 12 | 29 | 47 | 40 | 172 |
| 1 | 6 | 16 | 8 | 34 | 20 | 6 | 90 |
| 2 | 7 | 36 | 40 | 53 | 10 | 0 | 146 |
| 3 | 9 | 54 | 44 | 20 | 1 | 0 | 128 |
| 4 | 25 | 116 | 45 | 14 | ......... | 0 | 200 |
| 5 | 27 | 90 | 24 | 5 | ......... | 1 | 147 |
| 6 | 7 | 27 | 3 | 1 | ......... | ......... | 38 |
| Total | 97 | 367 | 176 | 156 | 78 | 47 | 921 |
| Per cent of principals teaching: | | | | | | | |
| No periods | 16.5 | 7.6 | 6.8 | 18.5 | 60.3 | 85.1 | 18.7 |
| 1 period | 6.2 | 4.4 | 4.6 | 21.8 | 25.6 | 12.8 | 9.8 |
| 2 periods | 7.2 | 9.8 | 22.7 | 34.0 | 12.8 | .0 | 15.8 |
| 3 periods | 9.3 | 14.7 | 25.0 | 12.8 | 1.3 | .0 | 13.9 |
| 4 periods | 25.8 | 31.6 | 25.6 | 9.0 | ......... | .0 | 21.7 |
| 5 periods | 27.8 | 24.5 | 13.6 | 3.2 | ......... | 2.1 | 16.0 |
| 6 periods | 7.2 | 7.4 | 1.7 | .7 | ......... | ......... | 4.1 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE XIX.

| | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. |
|---|---|---|---|---|---|---|---|
| Number of teachers teaching— | | | | | | | |
| 1 period | 102 | 46 | 34 | 45 | 63 | 33 | 61 |
| 2 periods | 98 | 72 | 41 | 40 | 65 | 38 | 36 |
| 3 periods | 131 | 48 | 51 | 36 | 111 | 45 | 38 |
| 4 periods | 343 | 109 | 124 | 66 | 148 | 126 | 82 |
| 5 periods | 895 | 355 | 443 | 291 | 662 | 399 | 425 |
| 6 periods | 628 | 414 | 163 | 388 | 322 | 476 | 264 |
| 7 periods | 149 | 7 | 2 | 50 | 17 | 41 | 35 |
| Total | 2,346 | 1,051 | 858 | 916 | 1,388 | 1,158 | 941 |
| Number of schools | 152 | 62 | 64 | 74 | 96 | 70 | 50 |
| Per cent teaching— | | | | | | | |
| 1 period | 4.4 | 4.4 | 4.0 | 4.9 | 4.6 | 2.9 | 6.5 |
| 2 periods | 4.2 | 6.9 | 4.8 | 4.4 | 4.7 | 3.3 | 3.8 |
| 3 periods | 5.6 | 4.6 | 5.9 | 3.9 | 8.0 | 3.9 | 4.0 |
| 4 periods | 14.6 | 10.4 | 14.5 | 7.2 | 10.7 | 10.9 | 8.7 |
| 5 periods | 38.1 | 33.7 | 51.6 | 31.8 | 47.6 | 34.4 | 45.2 |
| 6 periods | 26.8 | 39.3 | 19.0 | 42.3 | 23.2 | 41.0 | 28.1 |
| 7 periods | 6.3 | .7 | .2 | 5.5 | 1.2 | 3.6 | 3.7 |

| | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. | Total. |
|---|---|---|---|---|---|---|---|
| Number of teachers teaching— | | | | | | | |
| 1 period | 36 | 24 | 86 | 4 | 8 | 62 | 604 |
| 2 periods | 33 | 24 | 82 | 6 | 11 | 70 | 616 |
| 3 periods | 37 | 13 | 77 | 8 | 14 | 42 | 651 |
| 4 periods | 64 | 46 | 221 | 30 | 31 | 202 | 1,592 |
| 5 periods | 164 | 90 | 781 | 71 | 79 | 534 | 5,189 |
| 6 periods | 144 | 58 | 782 | 70 | 40 | 307 | 4,056 |
| 7 periods | 0 | 0 | 49 | 0 | 0 | 14 | 364 |
| Total | 478 | 255 | 2,078 | 189 | 183 | 1,231 | 13,072 |
| Number of schools | 50 | 27 | 148 | 16 | 18 | 87 | 914 |
| Per cent teaching— | | | | | | | |
| 1 period | 7.5 | 9.4 | 4.1 | 2.1 | 4.4 | 5.1 | 4.6 |
| 2 periods | 6.9 | 9.4 | 3.9 | 3.2 | 6.0 | 5.7 | 4.8 |
| 3 periods | 7.7 | 5.1 | 3.7 | 4.3 | 7.7 | 3.5 | 5.0 |
| 4 periods | 13.4 | 18.0 | 10.8 | 15.9 | 17.0 | 16.4 | 12.2 |
| 5 periods | 34.4 | 55.3 | 37.5 | 37.5 | 43.1 | 43.2 | 39.6 |
| 6 periods | 30.1 | 22.8 | 37.6 | 37.0 | 28.1 | 24.9 | 31.0 |
| 7 periods | .0 | .0 | 2.4 | .0 | .0 | 1.2 | 2.8 |

| | 0-100 | 101-200 | 201-300 | 301-500 | 501-1,000. | 1,001 and over. | Total. |
|---|---|---|---|---|---|---|---|
| Number of teachers teaching— | | | | | | | |
| 1 period | 110 | 244 | 85 | 101 | 42 | 22 | 604 |
| 2 periods | 97 | 219 | 93 | 103 | 64 | 40 | 616 |
| 3 periods | 65 | 195 | 98 | 127 | 113 | 53 | 651 |
| 4 periods | 132 | 431 | 207 | 304 | 287 | 231 | 1,592 |
| 5 periods | 203 | 978 | 694 | 1,036 | 1,074 | 1,204 | 5,189 |
| 6 periods | 125 | 1,023 | 762 | 927 | 495 | 714 | 4,056 |
| 7 periods | 6 | 53 | 61 | 59 | 56 | 129 | 364 |
| Total | 738 | 3,153 | 2,000 | 2,657 | 2,131 | 2,393 | 13,072 |
| Number of schools | 94 | 360 | 175 | 156 | 75 | 54 | 914 |
| Per cent teaching— | | | | | | | |
| 1 period | 14.9 | 7.8 | 4.3 | 3.8 | 2.0 | 0.9 | 4.6 |
| 2 periods | 13.2 | 7.0 | 4.7 | 3.9 | 3.0 | 1.7 | 4.8 |
| 3 periods | 8.8 | 6.2 | 4.8 | 4.8 | 5.3 | 2.2 | 5.0 |
| 4 periods | 17.9 | 13.7 | 10.4 | 11.4 | 13.5 | 9.7 | 12.2 |
| 5 periods | 27.5 | 30.9 | 34.6 | 39.0 | 50.4 | 50.3 | 39.6 |
| 6 periods | 16.9 | 32.7 | 38.1 | 34.9 | 23.2 | 29.8 | 31.0 |
| 7 periods | .8 | 1.7 | 3.1 | 2.2 | 2.6 | 5.4 | 2.8 |

*Number of periods taught by teachers.*—The efficiency of the instruction is likely to be greatly lessened if the teacher is required to teach an excessive number of periods. The recognition of this fact by the association is shown by the following statement found among its standards:

> The number of daily periods of classroom instruction given by any teacher should not exceed five, each to extend over at least 40 minutes in the clear. The board of inspectors will reject all schools having more than six recitation periods per day for any teacher.

However, that the board of inspectors does not always reject schools that do not meet this requirement will be seen from the reports.

Table XIX is based upon the reports from 914 schools concerning the number of periods per day taught by their teachers. The table brings out the differences from State to State in this particular and shows their relation to enrollment. From the table we read that there are 2,346 teachers reported from 152 schools in Illinois, and that 102, or 4.4 per cent, of these teachers teach but one period daily; 98, or 4.2 per cent, two periods, etc.

It will be sufficient to call attention to a few of the more important facts brought out by the table. First and foremost it should be noticed that 2.8 per cent of the teachers reported teach seven periods daily, which is contrary to the standards of the association. Among the States the worst offender in this respect is Illinois, with Kansas a close second, while no teachers reported from Nebraska, North Dakota, Oklahoma, and South Dakota teach seven periods. From the standpoint of enrollment the schools having more than 1,000 students have the largest percentage of teachers (5.4 per cent) teaching seven periods. Furthermore, 31 per cent, or nearly one-third of all the teachers reported, teach six periods. This is contrary to the advice of the association, as stated above. The worst offender among the States in this case is Kansas with 42.3 per cent, and the State most nearly approaching the standards of the association is Iowa with but 19 per cent of her teachers teaching six periods. The medium-sized schools rather than the extra-large schools seem to be the worst offenders here, although they are not a great deal worse than the association as a whole. Another interesting fact is that the number of periods per teacher is more nearly standardized in the large schools than in the small schools. In the former 50.3 per cent of the teachers teach five periods daily, while in the latter the largest percentage teaching any given number of periods is 27.5 per cent and each particular number of periods is represented by a rather large percentage of teachers except the last. The tendency toward standardization becomes more and more apparent as we proceed from the smallest to the largest schools This is probably due in a measure to the fact that in the smaller schools the percentages of teachers teaching one and two periods are swelled by the inclusion of superintendents and principals as teachers.

## TABLE XX.

| Number of periods supervised. | Colorado. | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. |
|---|---|---|---|---|---|---|---|---|
| 0 | 7 | 42 | 24 | 23 | 19 | 36 | 26 | 20 |
| 1-5 | 7 | 15 | 9 | 9 | 9 | 17 | 18 | 11 |
| 6-10 | 13 | 45 | 20 | 22 | 43 | 25 | 17 | 9 |
| 11-15 | 3 | 8 | 3 | 4 | 2 | 6 | 2 | 3 |
| 16-20 | 0 | 3 | 1 | 3 | 1 | 3 | 2 | 0 |
| 21-25 | 2 | 1 | 1 | ...... | 0 | 1 | 2 | 0 |
| 26-30 | 1 | 2 | 0 | ...... | 1 | 0 | 0 | 1 |
| 31-35 | 0 | 0 | 1 | ...... | ...... | 1 | 1 | 0 |
| 36-40 | 0 | 2 | ...... | ...... | ...... | 0 | 0 | 0 |
| 41-45 | 0 | 1 | ...... | ...... | ...... | 0 | 0 | 1 |
| 46-50 | 0 | 1 | ...... | ...... | ...... | 0 | 0 | 0 |
| 51-55 | 0 | 0 | ...... | ...... | ...... | 0 | 1 | 1 |
| 56-60 | 0 | 0 | ...... | ...... | ...... | 1 | 0 | 0 |
| 61-65 | 0 | 0 | ...... | ...... | ...... | ...... | 0 | 0 |
| 66-70 | 0 | 0 | ...... | ...... | ...... | ...... | 1 | 0 |
| 96-100 | 0 | 0 | ...... | ...... | ...... | ...... | 0 | 1 |
| 111-115 | 0 | 0 | ...... | ...... | ...... | ...... | 1 | ...... |
| 126-130 | 0 | 1 | ...... | ...... | ...... | ...... | ...... | ...... |
| 131-135 | 0 | 0 | ...... | ...... | ...... | ...... | ...... | ...... |
| 136-140 | 0 | 1 | ...... | ...... | ...... | ...... | ...... | ...... |
| 151-155 | 1 | 0 | ...... | ...... | ...... | ...... | ...... | ...... |
| 156-160 | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ...... |
| 186-190 | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ...... |
| Total | 34 | 124 | 59 | 61 | 75 | 90 | 71 | 47 |
| Median | 6 | 6 | 3 | 4 | 6 | 3 | 3 | 2 |

| Number of periods supervised. | Montana. | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. | Total. |
|---|---|---|---|---|---|---|---|---|
| 0 | 5 | 11 | 7 | 50 | 4 | 5 | 25 | 304 |
| 1-5 | 2 | 9 | 7 | 28 | 2 | 3 | 9 | 155 |
| 6-10 | 7 | 25 | 12 | 45 | 7 | 8 | 37 | 335 |
| 11-15 | 1 | 2 | 1 | 12 | 0 | 0 | 2 | 49 |
| 16-20 | 1 | 1 | ...... | 2 | 1 | 2 | 3 | 23 |
| 21-25 | ...... | 0 | ...... | 2 | 0 | ...... | 3 | 12 |
| 26-30 | ...... | 1 | ...... | 0 | 1 | ...... | 2 | 9 |
| 31-35 | ...... | ...... | ...... | 2 | ...... | ...... | ...... | 5 |
| 36-40 | ...... | ...... | ...... | 1 | ...... | ...... | ...... | 3 |
| 41-45 | ...... | ...... | ...... | 0 | ...... | ...... | ...... | 2 |
| 46-50 | ...... | ...... | ...... | 1 | ...... | ...... | ...... | 2 |
| 51-55 | ...... | ...... | ...... | 0 | ...... | ...... | ...... | 2 |
| 56-60 | ...... | ...... | ...... | 0 | ...... | ...... | ...... | 1 |
| 61-65 | ...... | ...... | ...... | 1 | ...... | ...... | ...... | 1 |
| 66-70 | ...... | ...... | ...... | 0 | ...... | ...... | ...... | 1 |
| 96-100 | ...... | ...... | ...... | 0 | ...... | ...... | ...... | 1 |
| 111-115 | ...... | ...... | ...... | 0 | ...... | ...... | ...... | 1 |
| 126-130 | ...... | ...... | ...... | 0 | ...... | ...... | ...... | 1 |
| 131-135 | ...... | ...... | ...... | 1 | ...... | ...... | ...... | 1 |
| 136-140 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 |
| 151-155 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 |
| 156-160 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 |
| 186-190 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 |
| Total | 16 | 49 | 27 | 145 | 15 | 18 | 81 | 912 |
| Median | 6 | 6 | 5 | 4 | 6 | 6 | 6 | 5 |

TABLE XX—Continued.

| Number of periods supervised. | 0-100 | 101-200 | 201-300 | 301-500 | 501-1,000 | 1,001 | Total. |
|---|---|---|---|---|---|---|---|
| 0 | 49 | 119 | 55 | 47 | 23 | 11 | 304 |
| 1-5 | 21 | 80 | 31 | 13 | 6 | 4 | 155 |
| 6-10 | 22 | 134 | 87 | 69 | 17 | 6 | 335 |
| 11-15 | 3 | 10 | 4 | 17 | 13 | 2 | 49 |
| 16-20 | 3 | 7 | 1 | 3 | 8 | 1 | 23 |
| 21-25 | ......... | 0 | 0 | 4 | 4 | 4 | 12 |
| 26-30 | ......... | 2 | 0 | 4 | 2 | 1 | 9 |
| 31-35 | ......... | 0 | 1 | 1 | 2 | 1 | 5 |
| 36-40 | ......... | 0 | ......... | 0 | 1 | 2 | 3 |
| 41-45 | ......... | 1 | ......... | 0 | 0 | 1 | 2 |
| 46-50 | ......... | ......... | ......... | 0 | 1 | 1 | 2 |
| 51-55 | ......... | ......... | ......... | 0 | 0 | 2 | 2 |
| 56-60 | ......... | ......... | ......... | 0 | 0 | 1 | 1 |
| 61-65 | ......... | ......... | ......... | 0 | 0 | 1 | 1 |
| 66-70 | ......... | ......... | ......... | 1 | 0 | 0 | 1 |
| 96-100 | ......... | ......... | ......... | ......... | 1 | 0 | 1 |
| 111-115 | ......... | ......... | ......... | ......... | 0 | 1 | 1 |
| 126-130 | ......... | ......... | ......... | ......... | 1 | 0 | 1 |
| 131-135 | ......... | ......... | ......... | ......... | ......... | 1 | 1 |
| 136-140 | ......... | ......... | ......... | ......... | ......... | 1 | 1 |
| 151-155 | ......... | ......... | ......... | ......... | ......... | 1 | 1 |
| 156-160 | ......... | ......... | ......... | ......... | ......... | 1 | 1 |
| 186-190 | ......... | ......... | ......... | ......... | ......... | 1 | 1 |
| Total | 98 | 353 | 179 | 159 | 79 | 44 | 912 |
| Median | 0 | 4 | 5 | 6 | 8 | 13 | 5 |

From the foregoing it is evident that many teachers are being overworked. Consequently much of the work done in these schools is not of the very best order. It is further evident that the standards of the association are not being lived up to in practice in a good many instances.

*Supervised study.*—Since supervised study is still in the experimental stage, it is of especial interest to know to what extent the schools of the association are adopting some method of study supervision. The analysis of the reports concerning supervised study from 912 schools is represented in Table XX, which should be read thus: Of the 34 schools reporting from Colorado, 7 have no supervised study, 7 supervise from 1 to 5 periods, 13 from 6 to 10 periods, etc., and the median number of periods supervised for the State is 6.

Before passing to the following table attention should be directed to three points: First, the wide range of variation among the schools; second, the comparative uniformity in the median from State to State; and third, the effect of enrollment as expressed in the median. The wide range from no supervision at all to the supervision of 190 periods shows that the value of supervised study has not come to be universally recognized and that efforts along this line are as yet experimental. The uniformity in the median from State to State would indicate that no particular State is especially interested in the matter. On the other hand, the increase of the median from 0 for schools having enrollments of 100 and less to 13 for the largest schools indicates that the larger schools have been forced, possibly because of the character of the communities in which they are located, to provide some place in which students may study.

Table XXI is a condensation of Table XX with the additional percentage feature. From it we read that 7, or 20.6 per cent, of the 34 schools reporting from Colorado have no supervised study; 20, or 58.8 per cent, supervise from 1 to 10 periods daily; and 7, or 20.6 per cent, supervise more than 10 periods.

### TABLE XXI.

| | Colorado. | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. |
|---|---|---|---|---|---|---|---|---|
| Number of periods supervised: | | | | | | | | |
| 0 | 7 | 42 | 24 | 23 | 19 | 36 | 26 | 20 |
| 1-10 | 20 | 60 | 29 | 31 | 52 | 42 | 35 | 20 |
| Above | 7 | 22 | 6 | 7 | 4 | 12 | 10 | 7 |
| Total | 34 | 124 | 59 | 61 | 75 | 90 | 71 | 47 |
| Per cent supervising: | | | | | | | | |
| No periods | 20.6 | 33.9 | 40.7 | 37.7 | 25.4 | 40.0 | 36.7 | 42.6 |
| 1-10 | 58.8 | 48.4 | 49.1 | 50.9 | 69.3 | 46.7 | 49.3 | 42.6 |
| Above | 20.6 | 17.7 | 10.2 | 11.4 | 5.3 | 13.3 | 14.0 | 14.8 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

| | Montana. | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. | Total. |
|---|---|---|---|---|---|---|---|---|
| Number of periods supervised: | | | | | | | | |
| 0 | 5 | 11 | 7 | 50 | 4 | 5 | 25 | 304 |
| 1-10 | 9 | 34 | 19 | 73 | 9 | 11 | 46 | 490 |
| Above | 2 | 4 | 1 | 22 | 2 | 2 | 10 | 118 |
| Total | 16 | 49 | 27 | 145 | 15 | 18 | 81 | 912 |
| Per cent supervising: | | | | | | | | |
| No periods | 31.3 | 22.5 | 26.0 | 34.5 | 26.7 | 27.8 | 30.9 | 33.3 |
| 1-10 | 56.3 | 69.4 | 70.3 | 50.3 | 60.0 | 61.2 | 56.8 | 53.7 |
| Above | 12.4 | 8.1 | 3.7 | 15.2 | 13.3 | 11.0 | 12.3 | 13.0 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

| | 0-100 | 101-200 | 201-300 | 301-500 | 501-1,000 | 1,001 and over. | Total. |
|---|---|---|---|---|---|---|---|
| Number of periods supervised: | | | | | | | |
| 0 | 49 | 119 | 55 | 47 | 23 | 11 | 304 |
| 1-10 | 43 | 214 | 118 | 82 | 23 | 10 | 490 |
| Above | 6 | 20 | 6 | 30 | 33 | 23 | 118 |
| Total | 98 | 353 | 179 | 159 | 79 | 44 | 912 |
| Per cent supervising: | | | | | | | |
| No periods | 50.0 | 33.7 | 30.7 | 29.5 | 29.1 | 25.0 | 33.3 |
| 1-10 | 43.9 | 60.6 | 65.9 | 51.6 | 29.1 | 22.7 | 53.7 |
| Above | 6.1 | 5.7 | 3.4 | 18.9 | 41.8 | 52.3 | 13.0 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

## TABLE XXII.

| Number of weeks of 5 days each in the school year. | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. | Montana. | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Below 34 | 2 | 3 | .... | .... | 1 | 1 | .... | .... | 1 | .... | 2 | .... | .... | 1 | 11 |
| 34 | 1 | 1 | .... | .... | 1 | 0 | 1 | .... | 1 | .... | 1 | .... | .... | 2 | 8 |
| 35 | 2 | 2 | 1 | 4 | 0 | 3 | 5 | .... | 3 | .... | 6 | 2 | 1 | 1 | 30 |
| 36 | 40 | 38 | 48 | 70 | 5 | 49 | 30 | 8 | 42 | 20 | 69 | 15 | 14 | 44 | 492 |
| 37 | 13 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 3 | 4 | 1 | 1 | 3 | 28 |
| 38 | 40 | 6 | 12 | 2 | 34 | 12 | 2 | 3 | 1 | 4 | 54 | .... | 0 | 23 | 193 |
| 39 | 9 | 2 | 0 | .... | 10 | 2 | 2 | 1 | .... | .... | 8 | .... | 0 | 1 | 35 |
| 40 | 26 | 3 | 1 | .... | 42 | 3 | 8 | 2 | .... | .... | 8 | .... | 1 | 13 | 107 |
| 41 | 1 | .... | .... | .... | 1 | .... | .... | .... | .... | .... | 0 | .... | .... | .... | 2 |
| 42 | 1 | .... | .... | .... | 0 | .... | .... | .... | .... | .... | 0 | .... | .... | .... | 1 |
| Above 42 | 1 | .... | .... | .... | 1 | .... | .... | .... | .... | .... | 1 | .... | .... | .... | 3 |
| Total | 136 | 55 | 62 | 76 | 97 | 70 | 49 | 14 | 48 | 27 | 153 | 18 | 17 | 88 | 910 |
| Median | 38 | 36 | 36 | 36 | 39 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 |

## TABLE XXIII.

| Number of recitation periods in daily program. | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. | Montana. | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 3 | .... | .... | .... | 1 | 1 | 1 | .... | .... | .... | 2 | .... | .... | .... | 8 |
| 6 | 15 | .... | 9 | .... | 7 | 3 | 4 | 1 | 1 | 1 | 26 | .... | .... | 5 | 72 |
| 7 | 44 | 12 | 26 | 1 | 38 | 19 | 14 | 6 | 14 | 9 | 52 | 6 | 3 | 40 | 284 |
| 8 | 17 | 12 | 3 | 0 | 7 | 7 | 11 | 5 | 7 | 1 | 10 | 3 | 5 | 13 | 101 |
| 9 | 3 | .... | .... | 1 | 2 | .... | 2 | .... | .... | .... | 2 | .... | 1 | .... | 11 |
| 10 | 2 | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 | .... | .... | .... | 3 |
| Total | 84 | 24 | 38 | 2 | 55 | 30 | 32 | 12 | 22 | 11 | 93 | 9 | 9 | 58 | 479 |
| Median | 7 | 7 | 7 | 8 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 | 7 | 7 |

The table shows that in 33.3 per cent of the schools of the association there is no supervised study, that in 53.7 per cent there are from 1 to 10 periods supervised, and that in 13 per cent there are more than 10 periods supervised. It is very likely that in a large number of the cases represented by the 53.7 per cent supervised study does not so much give evidence of an attempt to make an experiment or to try out supervised study as it is a by-product of the school organization. It is forced rather than voluntary. Not infrequently a school has a study room where the students are supposed to be when not in class. Some teacher who happens not to have a class during a given period is put in charge of the study room for the one period; another teacher takes the room the following period, and so on. In a great many cases where from 1 to 10 periods of supervised study are reported this is probably what is referred to—not exactly supervised study, but something akin to it. In the 13 per cent of schools which have more than 10 periods supervised, doubtless we have in some cases serious attempts at study supervision.

### LENGTH OF SCHOOL YEAR, SCHOOL DAY, ETC.

In Table XXII we have the analysis of 910 reports in answer to the inquiry as the number of weeks of five days each during which school is actually in session. The table should be read thus: Two of the 136 schools reporting from Illinois have school years of less than 34 weeks, one has a school year of 34 weeks, etc., and the median length of school year is 38 weeks.

The striking fact brought out by the table is the very wide variation from school to school in this respect, a variation of 10 weeks. This variation is especially noticeable in Illinois, Michigan, and Ohio. However, while there is this wide variation, the mode of 36 weeks stands out very clearly with 38 and 40 marked off distinctly from the rest. The median is also 36 in every State except Michigan and Illinois, in which States it is 39 and 38, respectively.

TABLE XXIV.

| Number of 60-minute hours in daily program. | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. | Montana. | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Below 4 | 1 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 |
| 4 | 3 | .... | 1 | 1 | 1 | 1 | .... | .... | .... | .... | .... | .... | .... | .... | 7 |
| 4¼ | 0 | .... | 0 | 0 | 0 | 2 | 1 | .... | .... | .... | 2 | .... | .... | 2 | 7 |
| 4½ | 2 | 1 | 2 | 1 | 5 | 0 | 3 | 1 | .... | .... | 12 | .... | .... | 1 | 28 |
| 4¾ | 10 | 4 | 0 | 1 | 2 | 0 | 3 | 0 | .... | .... | 9 | .... | 1 | 2 | 32 |
| 5 | 14 | 7 | 12 | 14 | 13 | 14 | 9 | 1 | 8 | 1 | 25 | 2 | 0 | 16 | 136 |
| 5¼ | 32 | 11 | 21 | 12 | 27 | 10 | 14 | 3 | 7 | 10 | 42 | 3 | 4 | 23 | 219 |
| 5½ | 16 | 15 | 12 | 5 | 21 | 23 | 5 | 5 | 12 | 9 | 30 | 4 | 7 | 24 | 188 |
| 5¾ | 9 | 7 | 4 | 12 | 4 | 6 | 4 | 3 | 11 | 4 | 9 | 1 | 2 | 7 | 83 |
| 6 | 16 | 11 | 6 | 10 | 5 | 2 | 5 | 1 | 5 | 2 | 10 | 5 | 2 | 5 | 85 |
| 6¼ | 0 | 0 | 0 | 3 | 2 | 0 | 0 | .... | 0 | 1 | 4 | 0 | .... | 0 | 10 |
| 6½ | 6 | 2 | 0 | 4 | 3 | 1 | 3 | .... | 3 | 0 | 1 | 1 | .... | 2 | 26 |
| 7 | 3 | 3 | 1 | 4 | 4 | 1 | 1 | .... | 2 | 1 | 3 | 1 | .... | 1 | 25 |
| Above | 2 | 2 | 2 | 2 | 1 | 2 | 1 | .... | .... | .... | 2 | .... | .... | 1 | 15 |
| Total | 114 | 63 | 61 | 69 | 88 | 62 | 49 | 14 | 48 | 28 | 149 | 17 | 16 | 84 | 862 |
| Median | 5¼ | 5½ | 5¼ | 5¾ | 5¼ | 5½ | 5¼ | 5½ | 5½ | 5½ | 5¼ | 5½ | 5½ | 5¼ | 5½ |

TABLE XXV.

| Number of minutes in recitation period. | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. | Montana. | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Below 37 | .... | .... | .... | .... | .... | 1 | .... | .... | .... | .... | .... | .... | .... | .... | 1 |
| 37 | 1 | .... | .... | 1 | 1 | 0 | .... | .... | .... | .... | .... | .... | .... | .... | 3 |
| 38 | 1 | 4 | 1 | 9 | 1 | 3 | 2 | .... | 1 | .... | 2 | .... | .... | 1 | 25 |
| 39 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | .... | 1 | .... | .... | 0 | 4 |
| 40 | 40 | 41 | 15 | 34 | 29 | 38 | 19 | 7 | 34 | 12 | 51 | 7 | 7 | 38 | 372 |
| 41 | 5 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 11 |
| 42 | 23 | 3 | 13 | 10 | 18 | 3 | 3 | 1 | 3 | 3 | 18 | 3 | 2 | 9 | 112 |
| 43 | 17 | 5 | 11 | 8 | 11 | 4 | 8 | 5 | 3 | 3 | 13 | 0 | 3 | 10 | 101 |
| 44 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 8 |
| 45 | 35 | 9 | 21 | 5 | 29 | 11 | 11 | 1 | 4 | 6 | 58 | 6 | 5 | 17 | 218 |
| 46 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | .... | 0 | 0 | 0 | 0 | .... | 0 | 1 |
| 47 | 3 | 0 | 0 | 0 | 1 | 0 | 2 | .... | 0 | 0 | 0 | 0 | .... | 0 | 6 |
| 48 | 3 | 0 | 1 | 0 | 2 | 0 | 1 | .... | 1 | 0 | 1 | 0 | .... | 0 | 9 |
| 49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | .... | 0 | 0 | 0 | 0 | .... | 0 | 0 |
| 50 | 10 | 0 | 1 | 1 | 1 | 0 | 2 | .... | 2 | 2 | 4 | 0 | .... | 2 | 25 |
| 55 | 4 | 0 | .... | 3 | 1 | 0 | 1 | .... | .... | .... | 1 | 1 | .... | .... | 11 |
| Above 55 | 2 | 1 | .... | 1 | .... | 1 | 1 | .... | .... | .... | 2 | .... | .... | .... | 8 |
| Total | 145 | 64 | 63 | 74 | 97 | 62 | 51 | 15 | 50 | 26 | 154 | 18 | 18 | 78 | 915 |
| Median | 43 | 40 | 43 | 40 | 42 | 40 | 43 | 40 | 40 | 42 | 43 | 42 | 43 | 41 | 42 |

*Number of recitation periods in the daily program.*—Owing to a misinterpretation of the question on the blank, the available reports on the number of recitation periods in the daily program is comparatively small. The blank asked for the number of recitations in the daily program. Some interpreted this to mean the total number of daily recitations, while others thought it had reference to the number of recitation *periods* in the daily program. Since the latter interpretation was made in the majority of cases, it was accepted and made the basis of Table XXIII. Where another interpretation was put on the question, or where the case is doubtful, the report is not included in the table. From the table we read that of the 84 schools reporting from Illinois 3 have but 5 recitation periods in the daily program, 15 have 6 periods, etc.

The mode is clearly seen to be 7. The median is 7 for the association as a whole, and 7 for every State except for Kansas and South Dakota, where it is 8.

*Number of 60-minute hours in the daily program.*—The actual number of 60-minute hours in the school day, excluding all recess periods, as reported from 862 schools, constitutes the basis of Table XXIV. The table is understood if read thus: One of the 114 schools reporting from Illinois has a school day of less than four 60-minute hours, three of 4 hours, 0 of 4¼ hours, etc.

The striking fact here brought out is the great variation in the length of the school day from school to school, which ranges from less than 4 to more than 7 hours. The variation from State to State, however, is not great, the medians being very uniform, in no case being either less than 5¼ or more than 5¾ hours.

*Number of minutes in the recitation period.*—Table XXV shows the distribution of 915 schools reporting on the number of minutes in the recitation period. It should be read as follows: The recitation period in one of the 145 schools reporting from Illinois is 37 minutes in length, in one it is 38 minutes, in 0 it is 39, etc.

Again, the absence of uniformity is the surprising fact. As important as is the length of the recitation period, we find it varying from below 37 minutes to above 55, a difference of 20 minutes at least. Some of the variation may be due to the misinterpretation of the question asked, which called for the number of minutes *in the clear* in each recitation period. The phrase "in the clear" was probably overlooked or disregarded in some cases and misinterpreted in others. It was intended that the number of minutes required to pass from one recitation to another be deducted from the length of the recitation period, because the class is not actually in session until the students are in the classroom and the recitation begun. The bimodal character of the distribution is evidenced by the much greater frequency at both 40 and 45 points to this conclusion. It was easier to give just 40 or 45 minutes, as the case might have been, than to deduct the 2 or 3 minutes necessary to pass between classes.

The length of the recitation period seems to vary but little from State to State, and not enough to call forth any particular comment.

It should be pointed out in this connection that the length of the recitation period is of real significance and that the marked lack of uniformity in this respect presents a serious problem to an association which is attempting to standardize certain of the features of the secondary school in order that there may be a more thorough cooperation among the secondary schools and between the secondary schools and the colleges. The "unit" course of study, while defined as "not less than the equivalent of 120 60-minute hours of classroom work," is seen to be a somewhat variable unit. The lower limit is set, but, since the upper is not, the actual classroom work done for a unit's credit in one school may be over one and a half times as much as that done in another school, as is shown by the reports. For example, computation based upon the reports from the four extreme schools concerning the number of weeks of five days each in the school year and the number of minutes in each recitation period discloses the fact that in two of these schools the total classroom work done during the school year to get a unit's credit amounts in each case to 185 60-minute hours, and in the other two schools the unit's credit is secured by doing only 103 60-minute hours of classroom work. Surely a unit's credit from the two latter schools should not be considered equal to that from the other two, if conditions are otherwise at all comparable. It should also be noted that the two schools giving a unit's credit for only 103 hours of work are not meeting the requirements of the association. Of the 910 schools reporting, there are 36 that do not meet these requirements. It perhaps should be added that in practically every case the commercial period is of exactly the same length as the recitation period, while the laboratory, manual training, agriculture, cooking, and sewing periods are in each case just double the recitation period.

*Number of daily recitations.*—The total number of daily recitations in a school is important, because it determines the scope of the course of study offered by that school to its students. If there are but comparatively few daily recitations, the chances are that opportunities of selection on the part of the student will be limited to the standard academic subjects, since the other subjects generally come as additional subjects and do not take the place of those which are considered to be unquestionably necessary to the course of study of the public high school. Table XXVI is a brief table which may throw some light on this feature of the school. It is read thus: In the 115 schools reporting from Illinois the average number of daily recitations per school is 66, in the 51 Indiana schools it is 68, etc.

### TABLE XXVI.

| | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average number of daily recitations per school | 66 | 68 | 54 | 54 | 57 | 66 | 73 | 36 | 37 | 63 | 49 | 46 | 56 | 59 |
| Number of cases | 115 | 51 | 48 | 73 | 81 | 58 | 41 | 44 | 27 | 126 | 13 | 14 | 65 | 756 |

| | 1-100 | 101-200 | 201-300 | 301-500 | 501-1,000 | 1,001 and over. | Total. |
|---|---|---|---|---|---|---|---|
| Average number of daily recitations per school. | 27 | 34 | 50 | 72 | 122 | 227 | 59 |
| Number of cases | 78 | 305 | 146 | 139 | 51 | 37 | 756 |

### TABLE XXVII.

| | Number of units required for graduation. | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 13½ | 14 | 15 | 15½ | 16 | 16½ | 17 | 17½ | 18 | 19 | 20 | 21½ | 24 | Total. |
| Number of schools | 1 | 1 | 152 | 13 | 732 | 7 | 23 | 2 | 14 | 3 | 1 | 1 | 1 | 951 |

It is necessary to call attention to only one or two points of interest. Among the States the average number of daily recitations varies from 36 in Nebraska to 73 in Missouri. That this variation is due largely to variation in size of schools from State to State is brought out in that portion of the table in which enrollment is made the basis of grouping the schools. Here we see the number of daily recitations increasing from 27 in schools having 100 students or less to 227 in schools of over 1,000 enrollment. Of course, this is a fact that is familiar to all, but it nevertheless makes it very clear that the large school has a distinct advantage over the small school in that it is able to offer a wider range of subjects and is therefore better enabled to meet the needs occasioned by individual differences among the students as well as the needs of the community.

## CONCERNING GRADUATION.

### NUMBER OF UNITS REQUIRED FOR GRADUATION.

In view of the fact that the number of units required for graduation from a secondary school is one of the first matters to be taken into consideration in any attempt to bring about a better understanding among the secondary schools and between the secondary schools and the colleges to which they are accredited, this feature of the high school is of especial interest to us.

Nine hundred and fifty-one schools reported concerning the number of units required for graduation. These reports form the basis of Table XXVII which reads from left to right as follows: One school requires but 13½ units for graduation; one, 14 units; 152, 15 units, etc. It should be stated here that according to the standards of the association, "No school shall be accredited which does not require 15 units; as defined by the association for graduation."

TABLE XXVIII.

| Number of units for each graduate in 1913. | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. | Montana. |
|---|---|---|---|---|---|---|---|---|
| 15 | 649 | 145 | 299 | 384 | 715 | 14 | 479 | 28 |
| 15½ | 305 | 320 | 285 | 40 | 246 | 120 | 103 | 33 |
| 16 | 4,177 | 1,875 | 1,900 | 2,024 | 2,081 | 2,582 | 848 | 284 |
| 16½ | 490 | 197 | 147 | 8 | 302 | 174 | 50 | 19 |
| 17 | 242 | 143 | 108 | 156 | 233 | 148 | 86 | 76 |
| 17½ | 161 | 86 | 43 | 2 | 130 | 74 | 22 | 0 |
| 18 | 94 | 102 | 26 | 2 | 77 | 69 | 407 | 3 |
| 19 | 97 | 10 | 28 | ........ | 8 | 24 | 50 | 7 |
| 20 | 107 | 6 | ........ | ........ | 17 | 8 | 126 | 2 |
| 21 | 30 | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| Total | 6,352 | 2,884 | 2,836 | 2,616 | 3,809 | 3,213 | 2,171 | 452 |

| Number of units for each graduate in 1913. | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. | Total. |
|---|---|---|---|---|---|---|---|
| 15 | 297 | 144 | 158 | 20 | 6 | 903 | 4,241 |
| 15½ | 114 | 52 | 288 | 64 | 2 | 149 | 2,121 |
| 16 | 872 | 224 | 5,775 | 309 | 323 | 2,156 | 25,430 |
| 16½ | 109 | 27 | 515 | 18 | 94 | 279 | 2,429 |
| 17 | 36 | 35 | 445 | 27 | 52 | 208 | 1,995 |
| 17½ | 25 | 19 | 99 | 10 | 5 | 27 | 703 |
| 18 | 11 | 14 | 161 | 27 | 10 | 132 | 1,135 |
| 19 | ........ | 1 | 241 | 1 | ........ | 35 | 502 |
| 20 | ........ | ........ | 8 | ........ | ........ | 33 | 307 |
| 21 | ........ | ........ | ........ | ........ | ........ | ........ | 30 |
| Total | 1,464 | 516 | 7,690 | 476 | 492 | 3,922 | 38,893 |

| Number of units for each graduate in 1913. | Under 2,500 | 2,501–5,000 | 5,001–7,500 | 7,501–10,000 | 10,001–15,000 | 15,001–50,000 | 50,001 and over. | Total. |
|---|---|---|---|---|---|---|---|---|
| 15 | 489 | 431 | 184 | 351 | 310 | 1,130 | 1,346 | 4,241 |
| 15½ | 321 | 470 | 370 | 271 | 193 | 436 | 60 | 2,121 |
| 16 | 2,637 | 3,958 | 2,385 | 2,355 | 2,205 | 4,112 | 7,778 | 25,430 |
| 16½ | 276 | 445 | 377 | 223 | 321 | 494 | 293 | 2,429 |
| 17 | 154 | 438 | 239 | 274 | 133 | 328 | 429 | 1,995 |
| 17½ | 75 | 122 | 102 | 104 | 76 | 122 | 102 | 703 |
| 18 | 92 | 107 | 183 | 101 | 62 | 144 | 446 | 1,135 |
| 19 | 18 | 59 | 87 | 15 | 5 | 45 | 273 | 502 |
| 20 | 4 | 23 | 14 | 22 | 1 | 11 | 232 | 307 |
| 21 | 30 | ........ | ........ | ........ | ........ | ........ | ........ | 30 |
| Total | 4,096 | 6,053 | 3,941 | 3,716 | 3,306 | 6,822 | 10,959 | 38,893 |

It is seen that 732, or 77 per cent, of the 951 schools reporting require 16 units for graduation, and that the majority of the remaining schools require 15 units. Thus in this matter the schools seem to be thoroughly standardized. The single school requiring 24 units is a six-year high school in a school system in which the six-and-six plan is being tried out.

### NUMBER OF STUDENTS GRADUATING IN 1913 WITH MORE THAN 14 UNITS.

While a school requires a student to do a certain amount of work for graduation, it does not prevent his collecting more than the required number of units of work. This surplus of work done in the high school has become a real problem. It raises the question of giving college credit for work done in the secondary school. If college credit is not given for such work, the question arises whether the student has not been sacrified to a lack of coordination between high schools and colleges. On the other hand, if credit is given, it is only fair that work of a high grade be demanded.

In Table XXVIII is shown the number of students graduating from the schools of the association in 1913 with more than 14 units. The table is composed of two parts, the one based upon State, the other upon population. It is understood when read thus: 649 of the students graduating from the schools of Illinois in 1913 graduated with 15 units, 305 with 15½ units, 4,177 with 16 units, etc.

It will be sufficient to call attention to but one or two points brought out in the table. While the great majority of the graduates are credited with 16 units, there are, nevertheless, considerable numbers with both less and more than 16 units. There seems to be no particular variation from State to State in this matter, while the proportion having more than 16 units is slightly larger in the large cities than in the small cities.

TABLE XXIX.

| | 60 | 65 | 67 | 68 | 70 | 71 | 75 | 76 | 77 | 78 | 80 | 81 | 82 | 83 | 85 | 90 | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Passing grade | 13 | 12 | 1 | 0 | 268 | 1 | 539 | 1 | 0 | 0 | 90 | 0 | 0 | 0 | 3 | .... | 928 |
| College recommendation grade | 5 | 5 | 0 | 1 | 211 | 1 | 411 | 1 | 1 | 2 | 216 | 4 | 1 | 3 | 56 | 5 | 923 |

The importance of the question just raised regarding the crediting by a college of surplus work done in the high school becomes very evident after an examination of the table, since there is a range of 7 units among the graduates from the schools of the association in 1913. It is obvious that, unless some provision be made on the part of the college for the crediting of the work done in excess of the 15 units (or whatever the entrance requirement for the particular college may be), there is going to be a great deal lost in passing from the secondary school to the college because of poor articulation.

### GRADE REQUIRED FOR PASSING AND FOR RECOMMENDATION TO COLLEGE.

That the grade required for passing and the grade required for recommendation to college are not always identical in a high school is brought out by Table XXIX, which is based upon 928 reports regarding the passing grade and 923 reports concerning the grade required for recommendation to college. Reading from left to right, 13 schools have a passing grade of 60, 12 a passing grade of 65, etc. Aside from the fact that the grade required for recommendation to college is in a number of cases higher than the grade required for passing, it is interesting to note the wide variation in both cases, although 70, 75, and 80 are much more frequent than any other of the grades. Since grades are the means of communication between institutions, there is evident need of standardization in these matters.

TABLE XXX.

| Average in all subjects for— | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Class of 1913 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 | 0 | 3 | 1 | 2 | 2 | 13 | 15 |
| Highest ranking student | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 | 1 | 0 |
| Lowest ranking student | 1 | 0 | 1 | 1 | 4 | 3 | 23 | 5 | 13 | 16 | 14 | 47 | 37 | 42 | 58 | 45 | 45 | 31 |
| Percentages: | | | | | | | | | | | | | | | | | | |
| Class of 1913 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 0.3 | 0.0 | 1.0 | 0.3 | 0.6 | 0.6 | 4.3 | 5.0 |
| Highest ranking student | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .2 | .2 | 0 |
| Lowest ranking student | 0.2 | 0.0 | 0.2 | 0.2 | 0.9 | 0.7 | 5.3 | 1.2 | 3.0 | 3.7 | 3.2 | 10.9 | 8.5 | 9.7 | 13.3 | 10.4 | 10.4 | 7.2 |

| Average in all subjects for— | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Class of 1913 | 20 | 32 | 33 | 61 | 35 | 30 | 24 | 9 | 11 | 4 | 4 | .... | .... | .... | .... | .... | .... | .... | 300 |
| Hignest ranking student | 1 | 0 | 1 | 1 | 1 | 6 | 6 | 15 | 19 | 22 | 37 | 62 | 79 | 98 | 69 | 50 | 15 | 5 | 489 |
| Lowest ranking student | 15 | 12 | 9 | 8 | 2 | 0 | 1 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 433 |
| Percentages: | | | | | | | | | | | | | | | | | | | |
| Class of 1913 | 6.7 | 10.7 | 11.0 | 20.4 | 11.8 | 10.0 | 8.0 | 3.0 | 3.7 | 1.3 | 1.3 | .... | .... | .... | .... | .... | .... | .... | .... |
| Highest ranking student | .2 | 0 | .2 | .2 | .2 | 1.2 | 1.2 | 3.1 | 3.9 | 4.5 | 7.6 | 12.7 | 16.2 | 20.0 | 14.1 | 10.2 | 3.1 | 1.0 | .... |
| Lowest ranking student | 3.5 | 2.8 | 2.1 | 1.9 | .5 | 0 | .2 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |

It should be mentioned that a number of the schools reporting, not included in the table, grade by letter A, B, C, etc., instead of by number. This difference further lessens the uniformity in grading.

### AVERAGE OF GRADUATING CLASS, HIGHEST AND LOWEST RANKING STUDENTS.

Three hundred schools reported the average in all subjects of the class graduating in 1913, 489 schools reported the average in all subjects of the highest ranking student of the same class, and 433 schools reported the average in all subjects of the lowest ranking student who was actually graduated. The distribution of these 3 groups is found in Table XXX, which is read thus: The average of the class graduating in 1913 from 1 school was 74, 3 schools 76, etc.; the average in all subjects of the highest ranking student in 1 school was 79, in 1 school 80, etc.; and the average of the lowest ranking student in 1 school was 64, in 1 school 66, etc.

The impressive fact brought out by this table is the utter lack of uniformity among the schools in grading. In a number of cases the average of the highest ranking student in some schools is lower than that of the lowest ranking student in others. That which is a very high grade in one school may be a very low grade in another and vice versa; and it is undoubtedly true that with the change of management and teachers the grading in a given school will change. Thus, as the art of grading now stands, for it is evidently far from a science, a grade conveys little meaning to anyone not acquainted with the system in which and the individual by whom it is given. It has a meaning for the person who gives it and possibly for the one who receives it, but it goes little farther.

In figure 14 the relation between the highest ranking student and the lowest ranking student and the average of the class is presented graphically. The distance along the horizontal axis denotes the grade and the distance along the vertical axis the per cent of schools. Two points should be mentioned. In the first place, the grade of the highest ranking student and the average of the class exhibits less variation from school to school than does the grade of the lowest ranking student, the mode or most frequent grade being much less marked in the latter than in the former. In the second place, the irregularities in the curve representing the lowest ranking student, which show 70, 75, and 78 to be more frequent than the grades above or below, seem to indicate that there is not so much care taken in grading the weakest student as in grading the strongest student. In a great many schools 70 and 75 are the passing grades. There seems to be a tendency to give this passing grade to those students who rank close to it. If a student seems to be just below, he is given the benefit of the doubt, while, if he is just above, it is easier to give the passing grade and be done with it.

TABLE XXXI.

| | Per cent of those going to college in highest third of the class. | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1–9 | 10–19 | 20–29 | 30–39 | 40–49 | 50–59 | 60–69 | 70–79 | 80–89 | 90–99 | 100 | Total. |
| Number of schools... | 11 | 2 | 6 | 17 | 28 | 28 | 82 | 43 | 17 | 27 | 9 | 63 | 333 |

### THE RANKING OF THE STUDENTS WHO GO TO COLLEGE.

It is generally assumed that the better students go to college. This assumption is borne out by Table XXXI, which is based upon the reports from 333 schools regarding the per cent of those students going to college from the class graduating in 1913 who stood in the highest third of the class while in high school ("highest third meaning highest numerical third after the class is ranked from best to worst"). The table becomes clear if read as follows: In 11 of the schools reporting, no students who went to college were in the highest

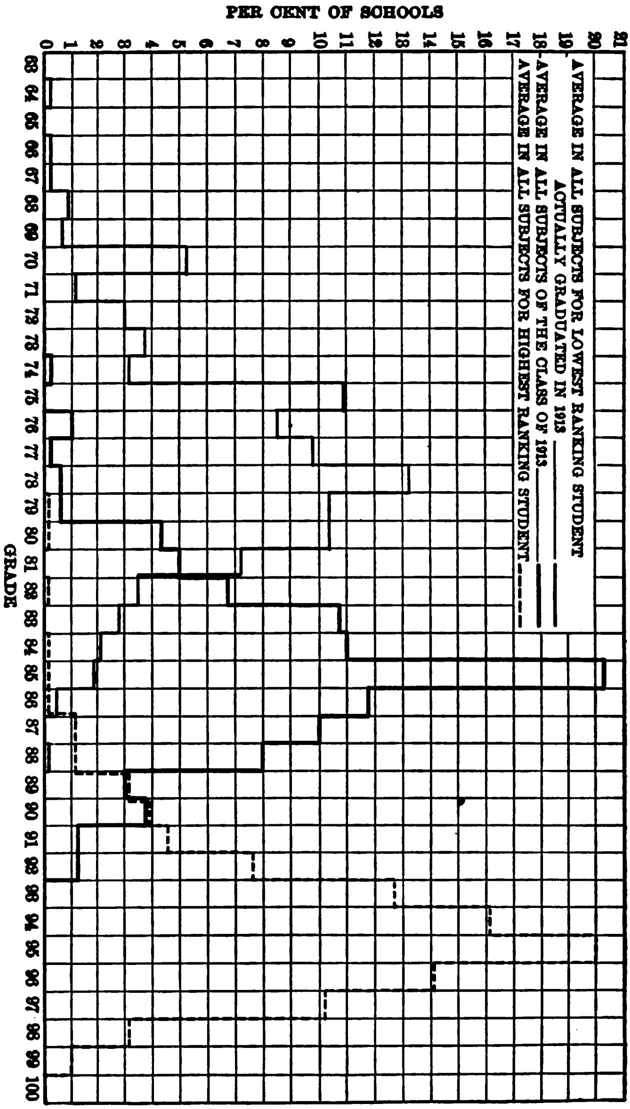

FIG. 14.—Relation between the highest ranking student, the lowest ranking student, and the average of the class.

third; in 2 schools between 1 per cent and 9 per cent were in the highest third; in 6 between 10 per cent and 19 per cent were in the highest third, etc.

TABLE XXXII.

| | State. | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. | Montana. |
| Number students graduating in 1913 who have gone to— | | | | | | | | |
| College | 953 | 436 | 435 | 323 | 440 | 409 | 221 | 41 |
| Commercial school | 67 | 73 | 49 | 45 | 80 | 53 | 23 | 18 |
| Trades | 67 | 42 | 27 | 30 | 108 | 13 | 17 | 0 |
| Farming | 65 | 46 | 42 | 76 | 63 | 36 | 11 | 15 |
| Normal school | 141 | 174 | 29 | 91 | 284 | 170 | 45 | 4 |
| Business | 422 | 148 | 119 | 96 | 215 | 101 | 70 | 22 |
| At home | 390 | 283 | 268 | 247 | 337 | 157 | 142 | 52 |
| Other occupations | 231 | 174 | 229 | 543 | 288 | 165 | 114 | 21 |
| Professions | 142 | 75 | 31 | 18 | 99 | 38 | 29 | 17 |
| Domestic economy and agriculture | 48 | 35 | 48 | 63 | 34 | 33 | 17 | 22 |
| Teaching | 124 | 28 | 80 | (1) | 84 | 160 | 13 | 15 |
| Unknown | 159 | 72 | 88 | 131 | 88 | 113 | 108 | 11 |
| Total | 2,809 | 1,586 | 1,455 | 1,663 | 2,120 | 1,448 | 810 | 238 |
| Per cent who have gone to— | | | | | | | | |
| College | 33.9 | 27.5 | 28.9 | 19.4 | 20.7 | 28.2 | 27.3 | 17.1 |
| Commercial school | 2.4 | 4.6 | 3.4 | 2.7 | 3.8 | 3.7 | 2.8 | 7.6 |
| Trades | 2.4 | 2.7 | 1.9 | 1.8 | 5.1 | .9 | 2.1 | 0 |
| Farming | 2.3 | 2.9 | 2.9 | 4.6 | 3.0 | 2.5 | 1.3 | 6.3 |
| Normal school | 5.0 | 11.0 | 2.0 | 5.5 | 13.4 | 11.7 | 5.6 | 1.7 |
| Business | 15.0 | 9.3 | 8.2 | 5.8 | 10.1 | 7.0 | 8.6 | 9.3 |
| At home | 13.9 | 17.8 | 18.4 | 14.9 | 15.8 | 10.8 | 17.6 | 21.8 |
| Other occupations | 8.2 | 11.0 | 15.7 | 32.5 | 13.6 | 11.4 | 14.1 | 8.8 |
| Professions | 5.1 | 4.7 | 2.1 | 1.1 | 4.7 | 2.6 | 3.6 | 7.2 |
| Domestic economy and agriculture | 1.7 | 2.2 | 3.3 | 3.8 | 1.6 | 2.3 | 2.1 | 9.3 |
| Teaching | 4.4 | 1.8 | 5.5 | (1) | 4.0 | 11.1 | 1.6 | 6.3 |
| Unknown | 5.7 | 4.5 | 6.7 | 7.9 | 4.2 | 7.8 | 13.3 | 4.6 |

| | State. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. | Total. |
| Number students graduating in 1913 who have gone to— | | | | | | | |
| College | 183 | 151 | 1,311 | 61 | 121 | 405 | 5,490 |
| Commercial school | 25 | 18 | 203 | 12 | 11 | 85 | 762 |
| Trades | 16 | 12 | 275 | 12 | 6 | 66 | 691 |
| Farming | 34 | 23 | 110 | 10 | 7 | 62 | 600 |
| Normal school | 54 | 40 | 165 | 26 | 37 | 224 | 1,484 |
| Business | 56 | 67 | 485 | 13 | 8 | 235 | 2,057 |
| At home | 118 | 44 | 631 | 41 | 54 | 327 | 3,091 |
| Other occupations | 126 | 83 | 459 | 49 | 99 | 327 | 2,908 |
| Professions | 22 | 9 | 129 | 2 | 9 | 53 | 673 |
| Domestic economy and agriculture | 10 | 4 | 50 | 5 | 55 | 51 | 475 |
| Teaching | 155 | 37 | 88 | 11 | 10 | 66 | 871 |
| Unknown | 34 | 20 | 243 | 20 | 30 | 160 | 1,287 |
| Total | 833 | 508 | 4,149 | 262 | 447 | 2,061 | 20,389 |
| Per cent who have gone to— | | | | | | | |
| College | 22.0 | 29.7 | 31.5 | 23.4 | 27.0 | 19.7 | 26.9 |
| Commercial school | 3.0 | 3.6 | 4.9 | 4.6 | 2.5 | 4.1 | 3.7 |
| Trades | 1.9 | 2.4 | 6.6 | 4.6 | 1.3 | 3.2 | 3.4 |
| Farming | 4.1 | 4.5 | 2.7 | 3.8 | 1.6 | 3.0 | 2.9 |
| Normal school | 6.5 | 7.8 | 4.0 | 9.9 | 8.3 | 10.9 | 7.3 |
| Business | 6.7 | 13.2 | 11.7 | 4.9 | 1.8 | 11.5 | 10.1 |
| At home | 14.2 | 8.7 | 15.2 | 15.6 | 12.1 | 15.8 | 15.1 |
| Other occupations | 15.1 | 16.3 | 11.1 | 18.7 | 22.2 | 15.8 | 14.3 |
| Professions | 2.6 | 1.8 | 3.1 | .8 | 2.0 | 2.6 | 3.3 |
| Domestic economy and agriculture | 1.2 | .8 | 1.2 | 1.9 | 12.3 | 2.5 | 2.4 |
| Teaching | 18.6 | 7.3 | 2.1 | 4.2 | 2.2 | 3.2 | 4.3 |
| Unknown | 4.1 | 3.9 | 5.9 | 7.6 | 6.7 | 7.8 | 6.3 |

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[1] The reports from Kansas concerning teaching were unsatisfactory.

TABLE XXXII—Continued.

| | Population. | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Under 2,500 | 2,501-5,000 | 5,001-7,500 | 7,501-10,000 | 10,001-15,000 | 15,001-50,000 | 50,001 and over. | Total. |
| Number students graduating in 1913 who have gone to— | | | | | | | | |
| College | 699 | 1,038 | 899 | 572 | 612 | 652 | 1,018 | 5,490 |
| Commercial school | 99 | 194 | 144 | 73 | 84 | 97 | 71 | 762 |
| Trades | 59 | 129 | 122 | 58 | 43 | 116 | 164 | 691 |
| Farming | 175 | 198 | 89 | 44 | 46 | 35 | 13 | 600 |
| Normal school | 178 | 323 | 242 | 158 | 173 | 166 | 244 | 1,484 |
| Business | 264 | 408 | 298 | 205 | 234 | 309 | 339 | 2,057 |
| At home | 452 | 757 | 566 | 288 | 344 | 406 | 278 | 3,091 |
| Other occupations | 600 | 787 | 445 | 265 | 303 | 389 | 119 | 2,908 |
| Professions | 103 | 138 | 90 | 54 | 46 | 104 | 138 | 673 |
| Domestic economy and agriculture | 79 | 156 | 97 | 38 | 16 | 54 | 35 | 475 |
| Teaching | 285 | 274 | 130 | 66 | 40 | 58 | 18 | 871 |
| Unknown | 134 | 274 | 175 | 107 | 112. | 119 | 366 | 1,287 |
| Total | 3,127 | 4,676 | 3,297 | 1,928 | 2,053 | 2,505 | 2,803 | 20,389 |
| Per cent who have gone to— | | | | | | | | |
| College | 22.3 | 22.3 | 27.4 | 29.7 | 29.8 | 26.0 | 36.3 | 26.9 |
| Commercial school | 3.2 | 4.1 | 4.4 | 3.8 | 4.1 | 3.9 | 2.5 | 3.7 |
| Trades | 1.9 | 2.8 | 3.7 | 3.0 | 2.1 | 4.6 | 5.9 | 3.4 |
| Farming | 5.6 | 4.2 | 2.7 | 2.3 | 2.2 | 1.4 | .5 | 2.9 |
| Normal school | 5.7 | 6.9 | 7.3 | 8.2 | 8.4 | 6.6 | 8.7 | 7.3 |
| Business | 8.4 | 8.7 | 9.0 | 10.6 | 11.4 | 12.3 | 12.1 | 10.1 |
| At home | 14.5 | 16.2 | 17.2 | 14.9 | 16.7 | 16.2 | 9.9 | 15.1 |
| Other occupations | 19.2 | 16.8 | 13.5 | 13.7 | 14.8 | 15.5 | 4.2 | 14.3 |
| Professions | 3.3 | 2.9 | 2.7 | 2.8 | 2.2 | 4.2 | 4.9 | 3.3 |
| Domestic economy and agriculture | 2.5 | 3.3 | 2.9 | 2.0 | .8 | 2.2 | 1.3 | 2.4 |
| Teaching | 9.1 | 5.9 | 3.9 | 3.4 | 2.0 | 2.3 | .6 | 4.3 |
| Unknown | 4.3 | 5.9 | 5.3 | 5.6 | 5.5 | 4.8 | 13.1 | 6.3 |

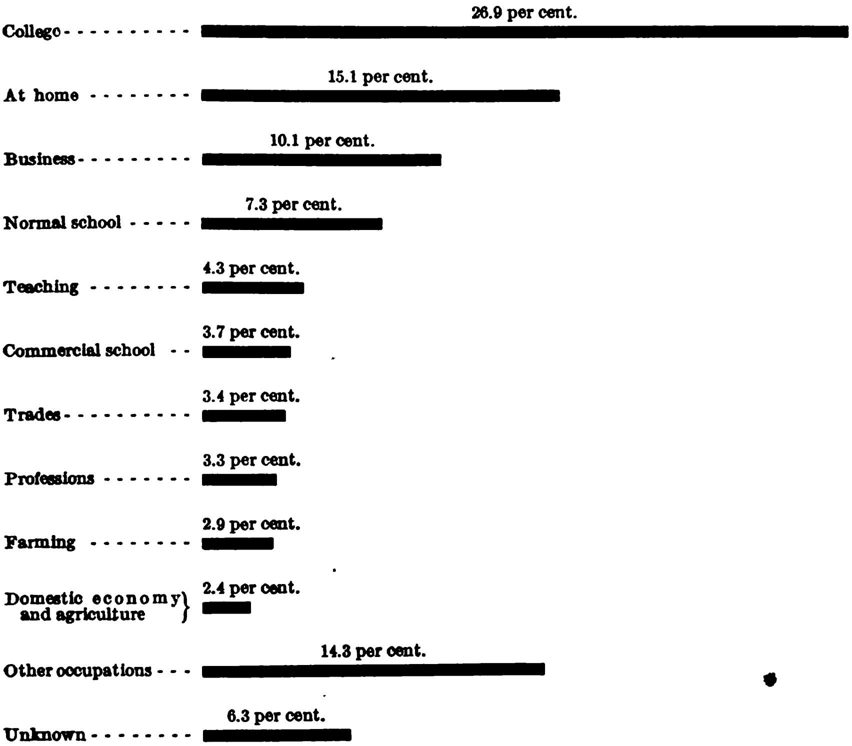

FIG. 15.—Percentage of class graduating in 1913 who are in various pursuits.

The significant fact is that of the 333 schools reporting, 241, or slightly over 72 per cent, report that 50 per cent or more of their students who went to college were in the highest third of the class. Thus it is seen that, although many of the weaker students go to college, the majority rank well above the mediocre student.

### OCCUPATIONS OF CLASS GRADUATING IN 1913.

Since the school is coming to be regarded as a place to which the child may go in order to get a training that will fit him for his place in society rather than as a place to which he may go to be put through mental gymnastics of one kind or another, it is of interest to know what these students in the high school do after graduation. The analysis of 596 reports concerning the graduating class of 1913 has given us Table XXXII, which is composed of two parts, the one being based upon State, the other upon population, and each having the accompanying percentage feature. It is read thus: Of the 2,809 pupils graduating in 1913 from the 77 schools reporting from Illinois, 953, or 33.9 per cent, went to college; 67, or 2.4 per cent, went to commercial schools, etc.

There seems to be considerable variation from State to State in every case, although there is a larger percentage of the graduates going to college than doing any other one thing in every State except Montana and Kansas, in which States the largest percentage is found staying at home and in "other occupations," respectively. In the larger cities a larger percentage goes to college, enters the trades, and goes into business than in the small cities, while a larger percentage goes to the farm, enters "other occupations," and takes up teaching in the small cities than in the large cities.

The bar diagrams in figure 15 represent for the entire association the percentages of graduates going to college, staying at home, going into business, and so on. It is seen that over one-fourth of the high-school graduates go to college.

Table XXXIII.

| Number of recitation rooms. | State. | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Colorado. | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. |
| 0–5 | 15 | 34 | 13 | 17 | 26 | 29 | 27 | 15 |
| 6–10 | 12 | 39 | 31 | 30 | 25 | 40 | 29 | 19 |
| 11–15 | 3 | 18 | 6 | 10 | 14 | 12 | 6 | 7 |
| 16–20 | 3 | 17 | 5 | 2 | 2 | 8 | 2 | 1 |
| 21–25 | 1 | 8 | 2 | 1 | 0 | 3 | 0 | 1 |
| 26–30 | 1 | 3 | 1 | 1 | 0 | 3 | 1 | 2 |
| 31–35 | 0 | 2 | 3 | 0 | 0 | 0 | 1 | 1 |
| 36–40 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 |
| 41–45 | ...... | 1 | 0 | 2 | 1 | 0 | 1 | 1 |
| 46–50 | ...... | 2 | 0 | ...... | ...... | 1 | 1 | 0 |
| 51 and over | ...... | ...... | 2 | ...... | ...... | 1 | 1 | 1 |
| Total | 36 | 126 | 64 | 64 | 70 | 98 | 70 | 50 |
| Median | 7 | 9 | 9 | 8 | 7 | 8 | 7 | 7 |

TABLE XXXIII—Continued.

| Number of recitation rooms. | State. | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Montana. | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. | Total. |
| 0–5 | 2 | 31 | 19 | 51 | 6 | 6 | 31 | 322 |
| 6–10 | 9 | 14 | 7 | 54 | 8 | 10 | 36 | 363 |
| 11–15 | 1 | 3 | 2 | 21 | 2 | 1 | 10 | 116 |
| 16–20 | 2 | 0 | ........ | 9 | 0 | 1 | 1 | 53 |
| 21–25 | 1 | 1 | ........ | 7 | 0 | 1 | 3 | 29 |
| 26–30 | 1 | 0 | ........ | 4 | 0 | ........ | 2 | 19 |
| 31–35 | ........ | 1 | ........ | 2 | 0 | ........ | 0 | 10 |
| 36–40 | ........ | ........ | ........ | 0 | 1 | ........ | 0 | 12 |
| 41–45 | ........ | ........ | ........ | 1 | ........ | ........ | 2 | 9 |
| 46–50 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 4 |
| 51 and over | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 5 |
| Total | 16 | 50 | 28 | 149 | 17 | 19 | 85 | 942 |
| Median | 9 | 5 | 3 | 7 | 7 | 6 | 7 | 7 |

| Number of recitation rooms. | Enrollment. | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1-100 | 101-200 | 201-300 | 301-500 | 501-1,000 | 1,001 and over. | Total. |
| 0–5 | 67 | 212 | 27 | 6 | 6 | 4 | 322 |
| 6–10 | 31 | 147 | 131 | 49 | 4 | 1 | 363 |
| 11–15 | 1 | 12 | 24 | 71 | 8 | 0 | 116 |
| 16–20 | ........ | 0 | 2 | 27 | 23 | 1 | 53 |
| 21–25 | ........ | 1 | 1 | 5 | 18 | 4 | 29 |
| 26–30 | ........ | ........ | ........ | 0 | 13 | 6 | 19 |
| 31–35 | ........ | ........ | ........ | 0 | 5 | 5 | 10 |
| 36–40 | ........ | ........ | ........ | 1 | 1 | 10 | 12 |
| 41–45 | ........ | ........ | ........ | ........ | 1 | 8 | 9 |
| 46–50 | ........ | ........ | ........ | ........ | ........ | 4 | 4 |
| 51 and over | ........ | ........ | ........ | ........ | ........ | 5 | 5 |
| Total | 99 | 372 | 185 | 159 | 79 | 48 | 942 |
| Median | 4 | 5 | 8 | 12 | 20 | 37 | 7 |

## MATERIAL EQUIPMENT.

### NUMBER OF ROOMS FOR THE VARIOUS PURPOSES.

Table XXXIII is the result of an analysis of 942 reports concerning the number of rooms used *exclusively* for recitation purposes. It should be read in this fashion: In Colorado 15 schools reported from 0 to 5 rooms used exclusively for recitation purposes, 12 from 6 to 10, and so on. The table shows that for the whole association the number of recitation rooms for the largest number of schools falls in the interval from 6 to 10, and that 5 schools have more than 50 rooms used for recitation purposes only. The median for the association is 7. Among the States the median ranges from 3 for North Dakota to 9 in Illinois, Indiana, and Montana. It is somewhat surprising to find such a wide variation in so fundamental a matter as the number of recitation rooms.

The median for the several groups of schools when grouped according to enrollment shows that the number of recitation rooms increases with the enrollment of the school since it advances from 4 in schools with enrollments of 100 and less to 37 in schools having enrollments of more than 1,000 pupils. It should be noted, however, that the median does not increase so rapidly as does the enrollment.

Table XXXIV is a table of medians giving the median number of recitation rooms, laboratory rooms, manual-training rooms, domestic-science rooms, assembly rooms, and rooms used for more than one purpose for each State of the association and for the six groups of schools when grouped according to enrollment. The table is read thus: In Colorado the median number of recitation rooms is 7; laboratory rooms, 2; manual-training room, 1; domestic-science room, 1; assembly room, 1; room used for more than one purpose, 1; and the total of the medians is 13.

The table shows that in number of laboratory rooms the schools of Illinois are better supplied than those of any other State, while in North Dakota and South Dakota the median is lowest. The median number of manual training rooms is greatest in Montana, where it is 3. In both Nebraska and Ohio the median number of domestic science rooms is zero. The median number of assembly rooms is uniformly 1 throughout the States. The total of the medians favors Montana, where it is 18, and Illinois, with 17, and North Dakota foots the list with a total of but 9, Nebraska coming next with 10.

Enrollment seems to affect the median number of rooms for the various purposes in every instance except in the case of assembly rooms, where the median is uniformly 1 regardless of size of school.

In addition to the rooms used exclusively for recitation purposes, laboratory purposes, and so on, a school frequently has a number of rooms which are not used exclusively for any one purpose but for several purposes. The extent to which this is done is again brought out in Table XXXV, as is also the number of overcrowded rooms. From the table we read that the median number of rooms used for more than one purpose in the schools of Colorado is 1, and the median number of overcrowded rooms in the same State is zero. The median is 1 for all the States except Michigan, Minnesota, and North Dakota, where it is 2, and Missouri and Oklahoma, where it is zero. The median number of overcrowded rooms is uniformly zero in every State and in every group of schools. (The reader should keep in mind the fact that the reporting on the number of overcrowded rooms may be influenced by a desire on the part of the individual making out the report to put the school in the best light possible. Exactly what an overcrowded room is, is not defined by the association.)

### Table XXXIV.

| Median number. | State. | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Colorado. | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. |
| Recitation rooms | 7 | 9 | 9 | 8 | 7 | 8 | 7 | 7 |
| Laboratory rooms | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 |
| Manual training rooms | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 |
| Domestic science rooms | 1 | 2 | 1 | 2 | 1 | 1 | 2 | 1 |
| Assembly rooms | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Rooms used for more than 1 purpose | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 0 |
| Total of medians | 13 | 17 | 15 | 15 | 13 | 15 | 16 | 12 |

| Median number. | State. | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Montana. | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. | Total. |
| Recitation rooms | 9 | 5 | 3 | 7 | 7 | 6 | 7 | 7 |
| Laboratory rooms | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 |
| Manual training rooms | 3 | 1 | 1 | 1 | 1 | 1 | 2 | 1 |
| Domestic science rooms | 2 | 0 | 1 | 0 | 2 | 1 | 2 | 1 |
| Assembly rooms | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Rooms used for more than 1 purpose | 1 | 1 | 2 | 1 | 0 | 1 | 1 | 1 |
| Total of medians | 18 | 10 | 9 | 12 | 13 | 11 | 15 | 13 |

| Median number. | Enrollment. | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1-100 | 101-200 | 201-300 | 301-500 | 501-1,000 | 1,001 and over. | Total. |
| Recitation rooms | 4 | 5 | 8 | 12 | 20 | 37 | 7 |
| Laboratory rooms | 1 | 2 | 2 | 2 | 3 | 4 | 2 |
| Manual training rooms | 0 | 1 | 1 | 2 | 3 | 4 | 1 |
| Domestic science rooms | 1 | 1 | 1 | 2 | 2 | 3 | 1 |
| Assembly rooms | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Rooms used for more than 1 purpose | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Total of medians | 8 | 11 | 14 | 20 | 30 | 50 | 13 |

### Table XXXV.

| Median number. | State. | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Colorado. | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. |
| Rooms used for more than 1 purpose | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 0 |
| Overcrowded rooms | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Median number. | State. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Montana. | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. |
| Rooms used for more than 1 purpose | 1 | 1 | 2 | 1 | 0 | 1 | 1 |
| Overcrowded rooms | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

### TABLE XXXV—Continued.

| Median number. | Enrollment. | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1-100 | 101-200 | 201-300 | 301-500 | 501-1,000 | 1,001 and over. | Total. |
| Rooms used for more than 1 purpose | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Overcrowded rooms | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

### TABLE XXXVI.

| Number of rooms. | For laboratory. | For manual training. | For domestic science. | For assembly. | Used for more than 1 purpose. | Overcrowded rooms. |
|---|---|---|---|---|---|---|
| 0 | 99 | 274 | 277 | 112 | 318 | 783 |
| 1-3 | 700 | 551 | 607 | 805 | 495 | 130 |
| 4-8 | 132 | 96 | 54 | 24 | 109 | 15 |
| 9-15 | 10 | 17 | 4 | 1 | 14 | 13 |
| 16 and over | 1 | 4 | ........ | ........ | 6 | 1 |
| Total | 942 | 942 | 942 | 942 | 942 | 942 |
| Median | 2 | 1 | 1 | 1 | 1 | 0 |

### TABLE XXXVII.

| Recitations in study room? | State. | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Colorado. | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. |
| No | 30 | 103 | 58 | 59 | 60 | 63 | 27 | 35 |
| Yes | 6 | 23 | 6 | 5 | 10 | 35 | 43 | 15 |
| Total | 36 | 126 | 64 | 64 | 70 | 98 | 70 | 50 |

| Recitations in study room? | State. | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Montana. | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. | Total. |
| No | 15 | 40 | 15 | 99 | 17 | 19 | 75 | 715 |
| Yes | 1 | 10 | 13 | 50 | ........ | ........ | 10 | 227 |
| Total | 16 | 50 | 28 | 149 | 17 | 19 | 85 | 942 |

| Recitations in study room? | Enrollment. | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1-100 | 101-200 | 201-300 | 301-500 | 501-1,000 | 1,001 and over. | Total. |
| No | 56 | 260 | 164 | 141 | 60 | 34 | 715 |
| Yes | 43 | 112 | 21 | 18 | 19 | 14 | 227 |
| Total | 99 | 372 | 185 | 159 | 79 | 48 | 942 |

Since the median gives only the central tendency and does not give any idea whatsoever of range or deviation from the central tendency, it is likely to be unsatisfactory and give a false impression. Consequently Table XXXVI has been devised to overcome this difficulty. In this table it is attempted to give the distribution for each item of the 942 schools reporting on the number of rooms for the various purposes and the number of overcrowded rooms, without grouping the schools according to either State or enrollment. It is seen that, while the median number of laboratory rooms is 2, there are 99 schools having no rooms given over exclusively to laboratory purposes, and there is 1 school with over 16 laboratory rooms. Furthermore, although the median number of manual training rooms is less than that of laboratory rooms, there are 21 schools having 9 or more manual training rooms as opposed to 11 having a like number of laboratory rooms. And again, the median number of overcrowded rooms is zero, yet there are 159 schools reporting one or more rooms that are overcrowded.

If a school does not have a sufficient number of recitation rooms to meet the demand, it frequently has resort to the study room. This custom is to be deplored because both the student and the teacher are put to a disadvantage when the recitation is conducted in the presence of students other than those concerned in the recitation. It also disturbs the study of the students in the study room. The extent to which this is practiced in the schools of the association is shown in Table XXXVII, which is read as follows: In Colorado 30 of the 36 schools reporting do not and 6 do have recitations in the study room. Among the States the worst offenders in this regard are Minnesota and North Dakota. Although it is more frequent to find recitations in the study room in the small schools than in the large schools, the small schools by no means have a monopoly upon the practice. For the entire association 227, or slightly over 24 per cent, of the 942 schools reporting have recitations in the study room. This is indicative of cramped conditions and inadequate material facilities, or too few instructors.

### VALUE OF SCIENTIFIC APPARATUS.

Besides rooms, material equipment includes the apparatus necessary for proper instruction in the sciences and certain of the other subjects. The value of equipment in the various subjects is represented in Table XXXVIII, which is a somewhat general table giving the distribution for the entire association of the schools reporting on each item. The reader will notice at once that manual training is not included in the table. This is due to the omission of this item from the report blank. The value of equipment for manual training was not asked for and consequently information concerning it was not given. The table becomes clear if read as follows: Of the 897 schools reporting the value of physics equipment, 45 report equipment to the value of from $51 to $200, 311 from $201 to $500, etc., and the median value of physics equipment among the schools of the association is $650.

The reports were not entirely satisfactory in that they were incomplete in many cases, the number reporting varying from 897 for physics to 376 for agriculture. It is doubtless true that frequently information was withheld when the value of equipment was zero. The table shows a very wide variation among the schools in the value of equipment for each subject. In every subject except sewing there is at least one school having over $5,000 worth of equipment, while in every one except physics there are some schools having less than $50 worth of equipment. The amount spent annually for equipment also varies in the same way.

A more interesting table from the standpoint of comparison is Table XXXIX, which is a table of medians similar in organization to Table XXXIV. It should be read thus: Among the schools reporting from Colorado the median value of physics equipment is $895, of commercial equipment $675, etc.

TABLE XXXVIII.

| Value of equipment. | Physics. | Chemistry. | Botany. | Zoology. | Agriculture. | Sewing. | Cooking. | Commercial course. | Spent annually. |
|---|---|---|---|---|---|---|---|---|---|
| Under $50 | ........ | 13 | 77 | 66 | 138 | 37 | 3 | 16 | $26 |
| $51–$200 | 45 | 105 | 387 | 207 | 164 | 274 | 69 | 36 | 203 |
| $201–$500 | 311 | 282 | 238 | 113 | 51 | 171 | 272 | 155 | 189 |
| $501–$1,000 | 292 | 190 | 78 | 45 | 13 | 40 | 158 | 160 | 105 |
| $1,001–$2,000 | 154 | 99 | 29 | 25 | 6 | 15 | 43 | 90 | 44 |
| $2,001–$5,000 | 80 | 38 | 12 | 11 | 2 | 6 | 14 | 25 | 15 |
| $5,001–$10,000 | 12 | 7 | 2 | 1 | 2 | ........ | 3 | 1 | 0 |
| Above $10,000 | 3 | 1 | ........ | ........ | ........ | ........ | ........ | ........ | 1 |
| Total | 897 | 735 | 823 | 468 | 376 | 543 | 562 | 483 | 583 |
| Median | 650 | 465 | 180 | 170 | 75 | 175 | 430 | 605 | 285 |

TABLE XXXIX.

| Median value of equipment for— | State. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Colorado. | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. |
| Physics | $895 | $840 | $490 | $555 | $430 | $840 | $645 |
| Commercial course | 675 | 700 | 720 | 535 | 535 | 510 | 500 |
| Chemistry | 520 | 740 | 415 | 400 | 310 | 460 | 415 |
| Cooking | 490 | 445 | 450 | 365 | 420 | 450 | 540 |
| Botany | 215 | 205 | 210 | 110 | 160 | 185 | 155 |
| Sewing | 185 | 185 | 150 | 120 | 175 | 195 | 200 |
| Zoology | 220 | 215 | 185 | 120 | 150 | 165 | 95 |
| Agriculture | 50 | 140 | 75 | 50 | 60 | 85 | 335 |
| Total | 3,250 | 3,470 | 2,695 | 2,255 | 2,240 | 2,890 | 2,885 |
| Median amount spent annually. | 245 | 320 | 415 | 265 | 295 | 350 | 635 |

TABLE XXXIX—Continued.

| Median value of equipment for— | State. | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Missouri. | Montana. | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. |
| Physics | $550 | $1,500 | $390 | $590 | $835 | $400 | $625 | $670 |
| Commercial course | 775 | 650 | 290 | 565 | 680 | 850 | 500 | 735 |
| Chemistry | 475 | 820 | 255 | 300 | 635 | 550 | 415 | 485 |
| Cooking | 450 | 900 | 230 | 415 | 450 | 375 | 450 | 390 |
| Botany | 190 | 300 | 195 | 195 | 135 | 150 | 225 | 185 |
| Sewing | 200 | 325 | 70 | 160 | 190 | 140 | 125 | 175 |
| Zoology | 195 | 750 | 225 | 150 | 95 | 175 | 175 | 175 |
| Agriculture | 115 | 350 | 50 | 125 | 50 | 75 | 40 | 55 |
| Total | 2,950 | 5,595 | 1,705 | 2,500 | 3,070 | 2,715 | 2,555 | 2,870 |
| Median amount spent annually | 230 | 650 | 195 | 400 | 200 | 600 | 170 | 260 |

| Median value of equipment for— | Enrollment. | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1-100 | 101-200 | 201-300 | 301-500 | 501-1,000 | 1,001 and over. | Total. |
| Physics | $490 | $460 | $680 | $930 | $1,880 | $2,750 | $650 |
| Commercial course | 350 | 420 | 575 | 760 | 1,340 | 1,780 | 605 |
| Chemistry | 375 | 335 | 440 | 740 | 1,050 | 1,740 | 465 |
| Cooking | 410 | 360 | 380 | 525 | 715 | 865 | 430 |
| Botany | 135 | 130 | 165 | 310 | 480 | 1,160 | 180 |
| Sewing | 150 | 115 | 160 | 225 | 430 | 800 | 175 |
| Zoology | 120 | 100 | 125 | 260 | 470 | 1,060 | 170 |
| Agriculture | 55 | 65 | 75 | 125 | 200 | 600 | 75 |
| Total | 2,085 | 1,985 | 2,600 | 3,875 | 6,565 | 10,755 | 2,750 |
| Median amount spent annually | 175 | 190 | 300 | 440 | 800 | 960 | 285 |

For the entire association physics ranks first with $650 as the median, commercial subjects second with $605, and agriculture last with only $75. This same order is followed in most of the States, but there are numerous exceptions, as can be readily seen upon examination of the table. The number of interesting comparisons that could be drawn is almost without limit, but it will be sufficient to point out a few of the most important. A most interesting fact is that the Montana schools seem to be in a class by themselves, for in every case except that of commercial subjects the median is higher for Montana than for any other State. To be sure only 16 selected schools are included in the Montana report. The total of medians gives to Montana $5,595 and to Illinois, the nearest competitor, only $3,470. At the other extreme we find Nebraska with a total of but $1,705, less than one-third that of Montana. In the number of dollars spent annually Montana also heads the list with $650 and South Dakota comes last with $170.

Turning to the other half of the table we see that in every case the median value of equipment increases with the size of school. An interesting exception to this statement is disclosed upon comparing the group of schools having enrollments of 100 pupils or less with the group of schools next larger in size—that is, those having from 101 to 200 pupils. Except in the case of agriculture and commercial subjects the median favors the group of smaller schools and the total favors the smaller schools by $100. An explanation of this fact is probably found in the fact that only the exceptional school of an enrollment of less than 100 is able to qualify for admission to membership in the association. This includes a number of private schools and academies in which the equipment is generally somewhat more elaborate than in the ordinary public high school of the same size.

## LIBRARY FACILITIES.

### THE HIGH-SCHOOL LIBRARY.

The high-school library is coming to be a real and valuable feature of the modern high school. The character of this library among the north central schools can be determined in a measure by an examination of Table XL, in which it has been attempted to show the kind and number of books in these schools as determined by the reports. The table becomes clear when read as follows: Of the 704 schools reporting on the number of volumes in the high-school library for English, 4 reported no volumes, 70 reported from 1 to 50, 234 from 51 to 200, etc., and the median number of volumes for English is 238. In addition to the number of volumes in the library this table gives the number of volumes added in 1913 and the number of dollars spent for books during the same year. This table is of interest to show the variation from school to school in the number of volumes for the various subjects.

TABLE XL.

| Number of volumes. | English. | History. | Fiction. | Education. | Botany. | Physics. | Civics. | Latin. | German. | Chemistry. | Physical geography. | Agriculture. | Zoology. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 4 | 3 | 158 | 165 | 53 | 42 | 140 | 91 | 127 | 129 | 99 | 176 | 196 |
| 1-50 | 70 | 61 | 129 | 356 | 557 | 589 | 430 | 536 | 473 | 531 | 551 | 453 | 443 |
| 51-200 | 234 | 313 | 192 | 150 | 70 | 65 | 102 | 59 | 78 | 39 | 38 | 55 | 50 |
| 201-500 | 237 | 234 | 145 | 21 | 8 | 2 | 3 | 10 | 13 | 1 | 5 | 8 | 5 |
| 501-1,000 | 105 | 77 | 48 | 4 | ...... | ...... | 0 | ...... | 1 | ...... | ...... | 2 | ...... |
| 1,001-2,000 | 42 | 22 | 10 | 0 | ...... | ...... | 1 | ...... | ...... | ...... | ...... | 1 | ...... |
| 2,001-5,000 | 11 | 1 | 10 | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| 5,001 and over | 1 | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Total | 704 | 711 | 693 | 697 | 688 | 698 | 676 | 696 | 692 | 700 | 693 | 695 | 694 |
| Median | 238 | 189 | 83 | 21 | 18 | 16 | 14 | 13 | 10 | 9 | 9 | 8 | 8 |

| Number of volumes. | Mathematics. | Physiology. | Cooking. | Manual training. | Sewing. | Commercial course. | Drawing. | French. | United States Government reports. | State government reports. | Books added in 1913. | Spent for books in 1913. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 196 | 213 | 295 | 306 | 336 | 340 | 356 | 544 | 114 | 167 | 10 | 10 |
| 1-50 | 442 | 452 | 388 | 370 | 359 | 305 | 281 | 116 | 282 | 401 | 261 | 167 |
| 51-200 | 34 | 17 | 13 | 16 | 4 | 27 | 44 | 17 | 181 | 74 | 342 | 376 |
| 201-500 | 5 | 2 | 1 | 5 | ...... | 2 | 1 | 2 | 58 | 10 | 99 | 138 |
| 501-1,000 | 1 | ...... | ...... | ...... | ...... | 1 | ...... | 1 | 12 | 6 | 32 | 34 |
| 1,001-2,000 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 9 | 0 | 9 | 6 |
| 2,001-5,000 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 | 1 | ...... | 1 |
| 5,001 and over | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Total | 678 | 684 | 697 | 697 | 699 | 675 | 682 | 680 | 657 | 659 | 753 | 732 |
| Median | 7 | 5 | 2 | 2 | 1 | 0 | 0 | 0 | 37 | 13 | 78 | 111 |

In Table XLI is set forth the number of sets of encyclopedias in the libraries of the high schools. From it we read that of the 799 schools reporting, 8 report no encyclopedias; 93 report 1 set each; 218, 2 sets, etc. The median number of sets per school is 3. The table shows that although there is an actual variation of from 0 to 16 sets per school, the great majority have either 2, 3, or 4 sets.

TABLE XLI.

| | Sets of encyclopedia. | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 15 | 16 | Total. | Median. |
| Number of schools. | 8 | 93 | 218 | 219 | 114 | 64 | 27 | 16 | 17 | 9 | 10 | 1 | 1 | 1 | 1 | 799 | 3 |

Table XLII is another table of medians, and is read in this way: The median number of volumes for English in the libraries of the schools of Colorado is 290, for history 170, fiction 200, etc., and the total of the medians is 807.

TABLE XLII.

| Median number volumes for— | State. | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Colorado. | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. |
| English | 290 | 281 | 269 | 193 | 175 | 275 | 255 | 285 |
| History | 170 | 232 | 196 | 150 | 184 | 221 | 234 | 217 |
| Fiction | 200 | 88 | 23 | 50 | 68 | 140 | 180 | 67 |
| Education | 23 | 8 | 0 | 34 | 48 | 19 | 32 | 44 |
| Botany | 15 | 22 | 20 | 12 | 12 | 22 | 24 | 7 |
| Physics | 15 | 19 | 18 | 15 | 9 | 19 | 18 | 12 |
| Civics | 18 | 19 | 15 | 14 | 0 | 15 | 26 | 10 |
| Latin | 13 | 22 | 18 | 8 | 12 | 14 | 9 | 14 |
| German | 9 | 18 | 13 | 7 | 7 | 13 | 7 | 5 |
| Chemistry | 15 | 13 | 10 | 4 | 3 | 15 | 17 | 6 |
| Physical geography | 8 | 13 | 7 | 6 | 7 | 15 | 18 | 5 |
| Agriculture | 5 | 4 | 1 | 8 | 16 | 5 | 32 | 21 |
| Zoology | 10 | 22 | 3 | 7 | 3 | 14 | 17 | 9 |
| Mathematics | 13 | 14 | 12 | 9 | 0 | 9 | 8 | 6 |
| Physiology | 2 | 1 | 1 | 6 | 0 | 6 | 13 | 0 |
| Cooking | 0 | 5 | 0 | 5 | 4 | 2 | 9 | 0 |
| Manual training | 0 | 3 | 0 | 0 | 5 | 1 | 10 | 0 |
| Sewing | 0 | 0 | 0 | 3 | 4 | 2 | 5 | 0 |
| Commercial course | 1 | 7 | 0 | 0 | 0 | 8 | 0 | 0 |
| Drawing | 0 | 6 | 0 | 0 | 0 | 5 | 5 | 0 |
| French | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 807 | 797 | 606 | 531 | 557 | 820 | 919 | 708 |

TABLE XLII—Continued.

| Median number volumes for— | State. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Montana. | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. |
| English | 417 | 61 | 350 | 192 | 250 | 375 | 221 |
| History | 217 | 98 | 163 | 138 | 125 | 220 | 238 |
| Fiction | 34 | 40 | 83 | 81 | 41 | 213 | 92 |
| Education | 8 | 33 | 19 | 13 | 23 | 21 | 21 |
| Botany | 22 | 11 | 19 | 10 | 9 | 21 | 28 |
| Physics | 21 | 10 | 19 | 14 | 12 | 13 | 25 |
| Civics | (1) | 8 | 15 | 12 | 6 | 18 | 23 |
| Latin | 21 | 6 | 9 | 11 | 5 | 16 | 15 |
| German | 27 | 4 | 9 | 10 | 5 | 16 | 16 |
| Chemistry | 18 | 7 | 14 | 6 | 7 | 11 | 9 |
| Physical geography | 13 | 6 | 13 | 6 | 8 | 15 | 20 |
| Agriculture | 3 | 17 | 8 | 6 | 6 | 9 | 12 |
| Zoology | 8 | 0 | 7 | 2 | 5 | 16 | 9 |
| Mathematics | (1) | 8 | 9 | 6 | 3 | 15 | 9 |
| Physiology | (1) | 3 | 8 | 5 | 0 | 9 | 13 |
| Cooking | 0 | 1 | 8 | 0 | 1 | 2 | 6 |
| Manual training | 0 | 0 | 8 | 0 | 0 | 3 | 4 |
| Sewing | 2 | 0 | 6 | 0 | 0 | 3 | 0 |
| Commercial course | (1) | 0 | 6 | 0 | 0 | 8 | 7 |
| Drawing | (1) | 0 | 8 | 0 | 0 | 14 | 1 |
| French | (1) | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 811 | 313 | 781 | 512 | 506 | 1,018 | 769 |

| Median number volumes for— | Enrollment. | | | | | | Total. |
|---|---|---|---|---|---|---|---|
| | 1-100. | 101-200. | 201-300. | 301-500. | 501-1,000. | 1,001 and over. | |
| English | 186 | 175 | 247 | 344 | 517 | 850 | 238 |
| History | 140 | 153 | 198 | 247 | 356 | 750 | 189 |
| Fiction | 125 | 80 | 70 | 64 | 113 | 113 | 83 |
| Education | 14 | 25 | 23 | 17 | 16 | 25 | 21 |
| Botany | 12 | 15 | 16 | 21 | 31 | 53 | 18 |
| Physics | 9 | 15 | 17 | 18 | 23 | 40 | 16 |
| Civics | 9 | 9 | 15 | 17 | 39 | 69 | 14 |
| Latin | 8 | 10 | 12 | 16 | 32 | 43 | 13 |
| German | 6 | 7 | 9 | 17 | 38 | 53 | 10 |
| Chemistry | 8 | 6 | 9 | 12 | 25 | 27 | 9 |
| Physical geography | 6 | 9 | 9 | 10 | 16 | 43 | 9 |
| Agriculture | 5 | 12 | 9 | 8 | 0 | 3 | 8 |
| Zoology | 6 | 6 | 6 | 9 | 21 | 37 | 8 |
| Mathematics | 7 | 6 | 8 | 8 | 15 | 24 | 7 |
| Physiology | 6 | 5 | 5 | 4 | 12 | 16 | 5 |
| Cooking | 0 | 1 | 3 | 3 | 8 | 16 | 2 |
| Manual training | 0 | 1 | 1 | 2 | 5 | 19 | 2 |
| Sewing | 0 | 0 | 1 | 1 | 5 | 4 | 1 |
| Commercial course | 0 | 0 | 0 | 0 | 4 | 14 | 0 |
| Drawing | 3 | 0 | 0 | 0 | 12 | 25 | 0 |
| French | 0 | 0 | 0 | 0 | 0 | 17 | 0 |
| Total | 550 | 535 | 658 | 818 | 1,288 | 2,241 | 653 |

For the entire association the table shows English leading with 238 volumes, history second, with 189, and commercial subjects, drawing, and French tying for last place with medians of zero. English also leads in every State except Kansas, Nebraska, and Wisconsin, where it is surpassed by history. The examination of the totals brings out the interesting fact that here again the Nebraska schools have a firm grip on last place with but 313 volumes, as opposed to 1,018 for the South Dakota schools, which represent the other extreme.

The size of the school seems to have about the same effect upon library equipment as it was found to have upon material equipment,

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[1] The blanks sent to the Montana schools did not call for these subjects.

except in the case of books of fiction, for education, and for agriculture. In these three cases the table shows no definite correlation between the number of volumes and the size of school. The same relation between those schools having enrollments under 100 and those with from 101 to 200 pupils is found here that was found in the tables on material equipment. The group of smaller schools has facilities superior to those of the other group.

Table XLIII gives the median number of United States and State Government reports, and is read thus: In the schools of Colorado the median number of United States Government reports is 83 and of State government reports 7. It is seen that the larger schools do not possess a larger supply of these reports than do the smaller schools. This is doubtless due to the fact that they are free.

### TABLE XLIII.

| Median number volumes of— | State. | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Colorado. | Illinois | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. |
| United States Government reports | 83 | 35 | 33 | 30 | 39 | 41 | 49 | 22 |
| State government reports | 7 | 11 | 10 | 13 | 9 | 25 | 21 | 7 |

| Median number volumes of— | State. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Montana. | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. |
| United States Government reports | 40 | 50 | 46 | 19 | 31 | 50 | 40 |
| State government reports | 6 | 15 | 9 | 9 | 0 | 12 | 20 |

| Median number volumes of— | Enrollment. | | | | | | Total. |
|---|---|---|---|---|---|---|---|
| | 1-100. | 101-200. | 201-300. | 301-500. | 501-1,000. | 1,001 and over. | |
| United States Government reports | 23 | 41 | 40 | 33 | 34 | 42 | 37 |
| State government reports | 8 | 15 | 14 | 10 | 9 | 10 | 13 |

In Table XLIV is given the median number of sets of encyclopedias per school. It is read in the same way as the previous tables. The interesting fact is the striking uniformity from State to State, the median being 3 sets per school in every State except Nebraska and Oklahoma, where it is 2. The larger schools show a median of 4 sets as opposed to 2 for the smallest schools.

TABLE XLIV.

| Median number sets of— | State. | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Colorado. | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. |
| Encyclopedias | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |

| Median number sets of— | State. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Montana. | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. |
| Encyclopedias | 3 | 2 | 3 | 3 | 2 | 3 | 3 |

| Median number sets of— | Enrollment. | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1-100 | 101-200 | 201-300 | 301-500 | 501-1,000 | 1,001 and over. | Total. |
| Encyclopedias | 2 | 3 | 3 | 3 | 4 | 4 | 3 |

Table XLV gives the median number of books per school added in 1913 and the median number of dollars spent for books in the same year. Among the States the smallest number of books added per school as represented by the median is 44, for Nebraska; the largest is 150, for Oklahoma. The largest amount of money spent per school is $175, for Oklahoma, and the smallest, $75, for Ohio. The effect of enrollment is the same as in the previous cases, so it need not be discussed again.

TABLE XLV.

| Median number of— | State. | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Colorado. | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. |
| Books added in 1913 | 82 | 53 | 72 | 55 | 66 | 102 | 94 | 80 |
| Amount spent for books in 1913 | $91 | $125 | $105 | $81 | $99 | $137 | $95 | $118 |

| Median number of— | State. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Montana. | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. |
| Books added in 1913 | 110 | 44 | 88 | 64 | 150 | 106 | 80 |
| Amount spent for books in 1913 | $125 | $90 | $88 | $75 | $175 | $138 | $108 |

| Median number of— | Enrollment. | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1-100 | 101-200 | 201-300 | 301-500 | 501-1,000 | 1,001 and over. | Total. |
| Books added in 1913 | 58 | 63 | 70 | 103 | 97 | 270 | 78 |
| Amount spent for books in 1913 | $87 | $82 | $97 | $112 | $145 | $263 | $111 |

### THE CITY LIBRARY.

It often happens that, besides the high-school library, the high school has access to a city library. The extent to which the cities in which the schools of the North Central Association are located have public libraries is brought out in Table XLVI. This table is understood when read thus: In Colorado the cities in which 5 of the 32 schools reporting are located have no public libraries; the cities in which 4 of the schools are located have libraries of 2,500 volumes or less, etc.

The States in which the cities are least well equipped with libraries are Kansas, North Dakota, and Missouri, while the cities of Montana, Illinois, and Indiana seem to be very well provided. An examination of the part of the table based upon population shows that the number of cities not having libraries steadily decreases as the size of city increases and that the size of library increases along with the size of the city. This is one of the advantages which a school enjoys in being situated in a large city, although this advantage may be diminished by the fact that in a large city the library may not be so easily accessible as in a small one.

TABLE XLVI.

| Number of volumes in city library. | State. | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Colorado. | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. |
| 0 | 5 | 11 | 3 | 1 | 15 | 18 | 7 | 21 |
| 1-2,500 | 4 | 11 | 5 | 8 | 14 | 11 | 7 | 6 |
| 2,501-5,000 | 10 | 16 | 11 | 16 | 10 | 10 | 19 | 2 |
| 5,001-10,000 | 8 | 31 | 17 | 12 | 9 | 16 | 11 | 4 |
| 10,001-25,000 | 3 | 20 | 9 | 8 | 5 | 14 | 5 | 1 |
| 25,001-50,000 | 2 | 12 | 5 | 3 | 1 | 9 | 1 | 0 |
| 50,001-100,000 | ........ | 2 | 0 | ........ | ........ | 0 | 1 | 1 |
| 100,001 and over | ........ | 29 | 2 | ........ | ........ | 7 | 10 | 13 |
| Total | 32 | 132 | 52 | 48 | 54 | 85 | 61 | 48 |

| Number of volumes in city library. | State—Continued. | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Montana. | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. | Total. |
| 0 | 1 | 9 | 9 | 25 | 3 | 2 | 3 | 133 |
| 1-2,500 | 0 | 12 | 7 | 6 | 2 | 2 | 7 | 102 |
| 2,501-5,000 | 3 | 14 | 5 | 21 | 2 | 5 | 24 | 168 |
| 5,001-10,000 | 2 | 6 | 2 | 25 | 6 | 4 | 16 | 169 |
| 10,001-25,000 | 5 | 2 | ........ | 19 | 1 | 3 | 19 | 114 |
| 25,001-50,000 | 1 | 3 | ........ | 7 | ........ | ........ | 2 | 46 |
| 50,001-100,000 | ........ | 2 | ........ | 9 | ........ | ........ | 0 | 15 |
| 100,001 and over | ........ | ........ | ........ | 21 | ........ | ........ | 5 | 87 |
| Total | 12 | 48 | 23 | 133 | 14 | 16 | 76 | 834 |

TABLE XLVI—Continued.

| Number of volumes in city library. | Population. | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Under 2,500 | 2,501–5,000 | 5,001–7,500 | 7,501–10,000 | 10,001–15,000 | 15,001–50,000 | 50,001 and over. | Total. |
| 0 | 67 | 36 | 19 | 6 | 4 | 1 | ........ | 133 |
| 1–2,500 | 58 | 29 | 8 | 4 | 2 | 1 | ........ | 102 |
| 2,501–5,000 | 39 | 88 | 20 | 11 | 8 | 0 | 2 | 168 |
| 5,001–10,000 | 19 | 48 | 40 | 33 | 13 | 15 | 1 | 169 |
| 10,001–25,000 | ........ | 9 | 20 | 16 | 31 | 34 | 4 | 114 |
| 25,001–50,000 | ........ | 1 | 2 | 1 | 5 | 31 | 6 | 46 |
| 50,001–100,000 | ........ | 0 | ........ | ........ | ........ | 2 | 13 | 15 |
| 100,001 and over | ........ | 2 | ........ | ........ | ........ | 1 | 84 | 87 |
| Total | 183 | 213 | 109 | 71 | 63 | 85 | 110 | 834 |

## COURSE OF STUDY.

### THE METHOD OF ELECTION.

Does the student elect by subject, or by course, or by a combination of the two? This is a question that must be answered in some way by every school that permits any election whatsoever. Table XLVII, is based upon the reports from 909 schools. It is composed of two parts, the one giving the actual number of cases, the other the percentages, and is read as follows: Of the 34 schools reporting from Colorado, 19, or 56 per cent, permit their students to elect by subject; 4, or 12 per cent, permit their students to elect by course; and 11, or 32 per cent, combine the two methods of election.

It is interesting to note that for the whole association election by subject occurs about as frequently as election by course, while the combination method is very nearly as frequent as either of the other two. From State to State, however, some differences are plainly visible. Election by subject predominates to a considerable degree in Colorado, Michigan, and Indiana; election by courses in Ohio, Iowa, and North Dakota; while in Montana, and to a less extent in Kansas, the combination method is most frequently found. The size of city seems not to be definitely related to the method of election, although there does seem to be some tendency in the largest cities to adopt the method of election by course. This same statement holds for the size of school, as an examination of the table will show.

TABLE XLVII.

| Method of election. | State. | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Colorado. | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. |
| By subject | 19 | 43 | 28 | 17 | 18 | 50 | 25 | 21 |
| By course | 4 | 49 | 13 | 30 | 24 | 20 | 20 | 15 |
| Both | 11 | 30 | 18 | 16 | 30 | 25 | 21 | 10 |
| Total | 34 | 122 | 59 | 63 | 72 | 95 | 66 | 46 |
| Per cent by subject | 56 | 35 | 48 | 27 | 25 | 53 | 38 | 46 |
| Per cent by course | 12 | 40 | 22 | 48 | 33 | 21 | 30 | 33 |
| Per cent by both | 32 | 25 | 30 | 25 | 42 | 26 | 32 | 22 |

| Method of election. | State. | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Montana. | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. | Total. |
| By subject | 1 | 15 | 9 | 28 | 6 | 5 | 30 | 315 |
| By course | 5 | 21 | 12 | 67 | 4 | 8 | 28 | 320 |
| Both | 10 | 13 | 6 | 44 | 4 | 6 | 30 | 274 |
| Total | 16 | 49 | 27 | 139 | 14 | 19 | 88 | 909 |
| Per cent by subject | 6 | 31 | 33 | 20 | 42 | 26 | 34 | 35 |
| Per cent by course | 31 | 43 | 45 | 48 | 29 | 42 | 32 | 35 |
| Per cent by both | 63 | 26 | 22 | 32 | 29 | 32 | 34 | 30 |

| Method of election. | Population. | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Under 2,500 | 2,501–5,000 | 5,001–7,500 | 7,501–10,000 | 10,001–15,000 | 15,001–50,000 | 50,001 and over. | Total. |
| By subject | 67 | 82 | 42 | 31 | 23 | 40 | 30 | 315 |
| By course | 62 | 75 | 45 | 26 | 24 | 30 | 58 | 320 |
| Both | 59 | 69 | 32 | 31 | 28 | 30 | 25 | 274 |
| Total | 188 | 226 | 119 | 88 | 75 | 100 | 113 | 909 |
| Per cent by subject | 36 | 36 | 35 | 35 | 31 | 40 | 27 | 35 |
| Per cent by course | 33 | 33 | 38 | 30 | 32 | 30 | 51 | 35 |
| Per cent by both | 31 | 31 | 27 | 35 | 37 | 30 | 22 | 30 |

| Method of election. | Enrollment. | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1–100 | 101–200 | 201–300 | 301–500 | 501–1,000 | 1,001 and over. | Total. |
| By subject | 37 | 131 | 53 | 55 | 27 | 12 | 315 |
| By course | 39 | 122 | 54 | 47 | 28 | 26 | 316 |
| Both | 21 | 100 | 64 | 53 | 23 | 10 | 271 |
| Total | 97 | 353 | 171 | 155 | 78 | 48 | 902 |
| Per cent by subject | 38 | 37 | 31 | 36 | 35 | 25 | 35 |
| Per cent by course | 40 | 35 | 32 | 30 | 36 | 54 | 35 |
| Per cent by both | 22 | 28 | 37 | 34 | 29 | 21 | 30 |

## NUMBER OF UNITS OF WORK GIVEN IN THE VARIOUS SUBJECTS.

Certain difficulties arose in the preparation of the tables on this matter. The report blank called for the "number of units or half units of work actually being given this year in each subject." This is somewhat ambiguous, with the result that some reported the number of "units," others, the number of "half units," given in each subject. These differences, however, were in most cases easily detected by a comparison of the various items in the report, and the final table is made of corrected items. A real mistake, which was undoubtedly made in a few cases, although only in a few, and which was more difficult to detect, was a wrong interpretation of the number of units of work actually being given. It seems that in some cases the number of divisions in a subject was given instead of the number of different units of work offered in the school.

Concerning the number of units of work being given in the various subjects, there were reports from 869 schools. Upon these 869 reports all the following tables referring to the course of study are based. The first of these tables—Table XLVIII—is a somewhat general table in which is shown the number of units of work given in each subject in each of the 869 schools reporting. The table is read thus: One school reports 0 units of English, 0 schools report ½ unit, 5 schools report 1, etc.; 15 schools report 0 units of Latin, 2 schools ½ unit, 9 schools 1 unit, etc.

TABLE XLVIII.

| Number of units. | English. | Latin. | History. | Commercial Course. | German. | Algebra. | Geometry. | Manual training. | Physics. | Domestic science. | Chemistry. | Cooking. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 15 | 9 | 230 | 18 | 3 | 4 | 294 | 37 | 376 | 216 | 342 |
| ½ | 0 | 2 | 3 | 52 | 0 | 3 | 1 | 53 | 8 | 60 | 20 | 103 |
| 1 | 5 | 9 | 13 | 71 | 20 | 76 | 138 | 136 | 777 | 183 | 592 | 252 |
| 1½ | 1 | 4 | 32 | 24 | 3 | 632 | 678 | 18 | 21 | 19 | 13 | 29 |
| 2 | 3 | 63 | 104 | 72 | 435 | 118 | 34 | 206 | 21 | 168 | 20 | 115 |
| 2½ | 2 | 5 | 171 | 17 | 7 | 15 | 4 | 9 | 1 | 3 | 3 | 0 |
| 3 | 105 | 198 | 318 | 40 | 229 | 14 | 6 | 59 | 2 | 29 | 2 | 12 |
| 3½ | 55 | 5 | 72 | 15 | 9 | 1 | 0 | 3 | 0 | 0 | 1 | 0 |
| 4 | 617 | 552 | 119 | 132 | 131 | 2 | 1 | 79 | 1 | 26 | 1 | 15 |
| 4½ | 23 | 2 | 8 | 22 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 5 | 29 | 6 | 9 | 56 | 3 | 1 | 0 | 4 | 0 | 2 | 0 | 0 |
| 5½ | 2 | 0 | 2 | 16 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 3 | 2 | 5 | 43 | 9 | 0 | 2 | 2 | 0 | 1 | 0 | 0 |
| 6½ | 1 | 1 | 0 | 12 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 4 | 1 | 0 | 13 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| 7½ | 3 | 1 | 0 | 7 | 0 | 1 | 0 | 0 | 0 | 0 | ...... | 0 |
| 8 | 8 | 2 | 3 | 20 | 1 | 0 | 1 | 2 | 1 | 0 | ...... | 0 |
| 8½ | 2 | 0 | 0 | 5 | ...... | 0 | ...... | 0 | ...... | 0 | ...... | 0 |
| 9 | 0 | 0 | 0 | 5 | ...... | 0 | ...... | 0 | ...... | 2 | ...... | 1 |
| 9½ | 0 | 0 | 0 | 0 | ...... | 0 | ...... | 0 | ...... | ...... | ...... | ...... |
| 10 | 0 | 1 | 0 | 3 | ...... | 0 | ...... | 0 | ...... | ...... | ...... | ...... |
| 11 | 1 | ...... | 0 | 0 | ...... | 0 | ...... | 1 | ...... | ...... | ...... | ...... |
| 11½ | 0 | ...... | 0 | 2 | ...... | 0 | ...... | 1 | ...... | ...... | ...... | ...... |
| 12 | 1 | ...... | 0 | 1 | ...... | 0 | ...... | 0 | ...... | ...... | ...... | ...... |
| 12½ | 0 | ...... | 0 | 0 | ...... | 0 | ...... | 0 | ...... | ...... | ...... | ...... |
| 13 | 0 | ...... | 1 | 1 | ...... | 1 | ...... | 0 | ...... | ...... | ...... | ...... |
| 14 | 0 | ...... | ...... | 3 | ...... | ...... | ...... | 0 | ...... | ...... | ...... | ...... |
| 16 | 0 | ...... | ...... | 7 | ...... | ...... | ...... | 0 | ...... | ...... | ...... | ...... |
| 18½ | 1 | ...... | ...... | ...... | ...... | ...... | ...... | 0 | ...... | ...... | ...... | ...... |
| 24 | 1 | ...... | ...... | ...... | ...... | ...... | ...... | 0 | ...... | ...... | ...... | ...... |
| 26 | 1 | ...... | ...... | ...... | ...... | ...... | ...... | 0 | ...... | ...... | ...... | ...... |
| 30 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 0 | ...... | ...... | ...... | ...... |
| 35 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 0 | ...... | ...... | ...... | ...... |
| 62 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... |
| Total | 869 | 869 | 869 | 869 | 869 | 869 | 869 | 869 | 869 | 869 | 869 | 869 |
| Median | 4 | 4 | 3 | 1½ | 2 | 1½ | 1½ | 1 | 1 | ½ | 1 | ½ |
| Quartile deviation | 0 | ½ | ½ | 2 | ½ | 0 | 0 | 1 | 0 | 1 | ½ | ½ |
| Mode | 4 | 4 | 3 | 0 | 2 | 1½ | 1½ | 0 | 1 | 0 | 1 | 0 |

TABLE XLVIII—Continued.

| | Drawing. | Sewing. | Normal subjects. | Agriculture. | Botany. | French. | Physical geography. | Music. | Civics. | Physiology. | Zoology. | Education. | Other subjects. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 435 | 379 | 606 | 411 | 160 | 680 | 192 | 490 | 145 | 335 | 520 | 664 | 571 |
| ½ | 120 | 99 | 32 | 168 | 364 | 2 | 467 | 152 | 666 | 483 | 229 | 81 | 122 |
| 1 | 173 | 228 | 62 | 193 | 334 | 35 | 203 | 153 | 52 | 44 | 112 | 89 | 97 |
| 1½ | 21 | 24 | 15 | 10 | 3 | 1 | 2 | 14 | 3 | 2 | 4 | 4 | 15 |
| 2 | 53 | 104 | 52 | 41 | 7 | 70 | 3 | 34 | 2 | 1 | 2 | 11 | 29 |
| 2½ | 5 | 0 | 16 | 3 | 0 | 5 | 0 | 2 | 0 | 0 | 0 | 1 | 8 |
| 3 | 17 | 17 | 12 | 25 | 1 | 49 | 0 | 3 | 0 | 0 | 2 | 15 | 11 |
| 3½ | 1 | 0 | 4 | 4 | ...... | 0 | 0 | 0 | 0 | 0 | ...... | 1 | 3 |
| 4 | 30 | 16 | 48 | 13 | ...... | 24 | 1 | 17 | 0 | 2 | ...... | 3 | 5 |
| 4½ | 0 | 0 | 4 | 1 | ...... | 0 | 0 | 1 | 0 | 0 | ...... | ...... | 1 |
| 5 | 4 | 0 | 5 | ...... | ...... | 1 | 0 | 3 | 1 | 0 | ...... | ...... | 3 |
| 5½ | 0 | 0 | 3 | ...... | ...... | 0 | 0 | ...... | ...... | 0 | ...... | ...... | 0 |
| 6 | 4 | 1 | 3 | ...... | ...... | 2 | 0 | ...... | ...... | 0 | ...... | ...... | 0 |
| 6½ | 0 | 0 | 0 | ...... | ...... | ...... | 0 | ...... | ...... | 1 | ...... | ...... | 1 |
| 7 | 0 | 0 | 0 | ...... | ...... | ...... | 0 | ...... | ...... | 0 | ...... | ...... | 0 |
| 7½ | 0 | 0 | 1 | ...... | ...... | ...... | 1 | ...... | ...... | 1 | ...... | ...... | 1 |
| 8 | 2 | 0 | 4 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 0 |
| 8½ | 0 | 0 | 0 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 |
| 9 | 0 | 1 | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 0 |
| 9½ | 1 | ...... | 0 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 0 |
| 10 | 0 | ...... | 0 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 0 |
| 11 | 2 | ...... | 0 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 0 |
| 11½ | 0 | ...... | 0 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 0 |
| 12 | 0 | ...... | 0 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 0 |
| 12½ | 0 | ...... | 0 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 |
| 13 | 0 | ...... | 0 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| 14 | 0 | ...... | 0 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| 16 | 0 | ...... | 0 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| 18½ | 0 | ...... | 0 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| 24 | 0 | ...... | 0 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| 26 | 0 | ...... | 0 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| 30 | 0 | ...... | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| 35 | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| 62 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| Total | 869 | 869 | 869 | 869 | 869 | 869 | 869 | 869 | 869 | 869 | 869 | 869 | 869 |
| Median | 0 | ½ | 0 | ½ | ½ | 0 | ½ | 0 | ½ | ½ | 0 | 0 | 0 |
| Quartile deviation | ½ | ½ | ½ | ½ | ½ | 0 | 0 | ½ | 0 | ½ | ½ | 0 | ½ |
| Mode | 0 | 0 | 0 | 0 | ½ | 0 | ½ | 0 | ½ | ½ | 0 | 0 | 0 |

What was said in a previous paragraph in a general way regarding a wrong interpretation by some of those reporting is made specific in this table. Take English for instance. One school reports 26 units of English, another 24, and another 18½. It is hardly possible that so many units are actually being given in any school. These reports must have reference to the number of divisions in English instead of the number of units of English given. Similar extremes for manual training, commercial course, and drawing may be correct, while those for history, algebra, and normal subjects are probably errors.

An examination of the median, mode, and quartile deviation disclose some interesting facts. It should be remembered that the median here represents the number of units given in the middle school when the 869 schools are arranged in order, according to the number of units of a particular subject given, with the school giving the least number of units at one extreme and the school giving the greatest number of units at the other; the mode is the number of units found in the greatest number of schools; and the quartile deviation is the range of the middle 50 per cent divided by two. Where the quartile deviation is zero, at least 50 per cent of the schools give the same number of units as is represented by the median. In other words, a quartile deviation of zero is indicative of uniformity among the schools. A further indication of uniformity is found when the median and mode are identical.

It will be noticed that the median number of units given is highest in English and Latin, in both of which it is 4; history comes next with a median of 3, and German is third with 2. In algebra, geometry, and the commercial subjects the median is 1½; in physics, manual training, and chemistry it is 1; in cooking, agriculture, physical geography, physiology, civics, botany, domestic science, and sewing it is but ½; and in the remaining subjects, French, zoology, education, music, drawing, and normal subjects it is 0. When the median is zero, that means that at least 50 per cent of the schools do not give a single unit or half unit of the subject.

As previously mentioned, a quartile deviation of zero indicates uniformity, or a tendency toward standardization. An examination of the table shows that the quartile deviation is zero for English, physics, physical geography, French, civics, education, algebra, and geometry. It is also seen that the median is zero for French and education. This means that at least 75 per cent of the schools offer no French and no education. The quartile deviation of zero for the other six subjects, English, physics, physical geography, civics, algebra, and geometry, shows that the number of units offered is thoroughly standardized for each subject. Over 50 per cent of the schools offer 4 units of English, 1 unit of physics, ½ unit of physical geography, ½ unit of civics, 1½ units of algebra, and 1½ units of geometry. The largest quartile deviation is found in the number of units of commercial subjects offered where it is 2. Manual training and domestic science come next with a quartile deviation of 1. The large deviation shows that there is a wide variation among the schools as to the number of units given.

Table XLIX gives the total number of units of work for each subject given in each of the several groups of schools when the schools are grouped according to State, population, and enrollment. It is consequently composed of three parts, and is made clear, if read in this way: In the 122 schools reporting from Illinois, there is given a total of 568½ units of English, 457 units of Latin, 387½ units of history, etc.; the total number of units for all subjects combined is 4,263.

## TABLE XLIX.

| Number of units of— | State. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. |
| English | 568½ | 250 | 236½ | 261½ | 390½ | 247 | 201 |
| Latin | 457 | 217½ | 227 | 251½ | 315½ | 216 | 185 |
| History | 387½ | 189½ | 160½ | 222½ | 308½ | 161 | 167 |
| Commercial course | 408½ | 154 | 132 | 215½ | 339½ | 152 | 98½ |
| German | 339 | 202½ | 133½ | 174 | 243½ | 135 | 134 |
| Algebra | 213½ | 97 | 99½ | 116 | 162 | 90½ | 90 |
| Geometry | 194½ | 93½ | 86½ | 110 | 138 | 88 | 76½ |
| Manual training | 247 | 88½ | 97½ | 102 | 116 | 159½ | 56½ |
| Physics | 132 | 59½ | 61½ | 77 | 96½ | 59 | 46½ |
| Domesticscience | 115 | 67½ | 74½ | 72 | 64 | 84½ | 45 |
| Chemistry | 119½ | 53 | 26 | 34½ | 97 | 59 | 39 |
| Cooking | 102 | 62½ | 69 | 65½ | 56½ | 76½ | 85½ |
| Drawing | 188 | 69 | 22½ | 43 | 73½ | 49½ | 56½ |
| Sewing | 106 | 62 | 47½ | 65 | 60 | 74 | 48½ |
| Normal subjects | 25½ | 8½ | 131½ | 174 | 23½ | 133 | 19 |
| Agriculture | 85½ | 23 | 40½ | 68½ | 57 | 97½ | 27½ |
| Botany | 78 | 49 | 34 | 63½ | 68½ | 38 | 19 |
| French | 104 | 27 | 7 | 11½ | 73½ | 23 | 60 |
| Physical geography | 67½ | 23½ | 29½ | 31½ | 70½ | 28½ | 22 |
| Music | 85½ | 59 | 20½ | 44½ | 40 | 21½ | 31 |
| Civics | 62 | 28 | 29 | 40½ | 31 | 30½ | 16 |
| Physiology | 71 | 13 | 27½ | 41 | 19 | 22½ | 12½ |
| Zoology | 74 | 13 | 19½ | 14 | 32½ | 22 | 18 |
| Education | 16½ | 2 | 35½ | 29½ | 2½ | 2½ | 52½ |
| Other subjects | 65½ | 31 | 14½ | 26 | 27 | 42½ | 34½ |
| Total | 4,263 | 1,988 | 1,863 | 2,354½ | 2,901 | 2,113 | 1,581½ |
| Number of schools reporting | 122 | 61 | 60 | 74 | 95 | 62 | 50 |

| Number of units of— | State—Continued. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. | Total. |
| English | 168 | 104 | 568 | 69½ | 74 | 361½ | 3,500 |
| Latin | 156½ | 75 | 552½ | 66 | 59 | 293½ | 3,072 |
| History | 123½ | 62½ | 378 | 59 | 47 | 272½ | 2,539 |
| Commercial course | 95½ | 84½ | 387 | 50 | 38 | 296 | 2,446 |
| German | 117½ | 55 | 411 | 36 | 45 | 230 | 2,256 |
| Algebra | 75½ | 85½ | 239 | 27½ | 26 | 118½ | 1,390½ |
| Geometry | 72 | 86 | 220½ | 24 | 27 | 109 | 1,275½ |
| Manual training | 37½ | 43 | 120 | 25 | 24 | 148 | 1,264½ |
| Physics | 48 | 24 | 147 | 16 | 16 | 92 | 875 |
| Domesticscience | 28 | 23½ | 67 | 21 | 17½ | 130½ | 810 |
| Chemistry | 38½ | 18½ | 128½ | 11½ | 13 | 51½ | 689½ |
| Cooking | 25½ | 27 | 54½ | 20½ | 9 | 78 | 682 |
| Drawing | 11 | 17 | 111 | 10½ | 5½ | 27 | 684 |
| Sewing | 14 | 28½ | 50 | 17½ | 9½ | 69 | 651½ |
| Normal subjects | 62 | 11 | 16½ | 2½ | 4½ | 36 | 642½ |
| Agriculture | 38 | 17 | 55½ | 7½ | 7½ | 52 | 527 |
| Botany | 26½ | 18 | 65½ | 8 | 11 | 63½ | 537½ |
| French | 6 | 3 | 105½ | 1 | 4 | 24½ | 450 |
| Physical geography | 22 | 12 | 73½ | 11 | 10 | 55½ | 457 |
| Music | 20½ | 11½ | 50 | 10½ | 6 | 19 | 419½ |
| Civics | 22 | 14 | 71½ | 7½ | 7½ | 39 | 398½ |
| Physiology | 12½ | 9½ | 37½ | 3 | 7 | 36½ | 312½ |
| Zoology | 5½ | 8 | 21½ | 4½ | 4½ | 10½ | 242½ |
| Education | 26 | 15 | 5½ | 2 | 1½ | 29½ | 220½ |
| Other subjects | 13½ | 9 | 70½ | 5½ | 5 | 32 | 376½ |
| Total | 1,265½ | 762 | 4,007 | 517 | 479 | 2,675 | 26,719½ |
| Number of schools reporting | 49 | 28 | 147 | 16 | 18 | 87 | 869 |

TABLE XLIX—Continued.

| Number of units of— | Population. | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Under 2,500. | 2,501–5,000. | 5,001–7,500. | 7,501–10,000. | 10,001–15,000. | 15,001–50,000. | 50,001 and over. | Total. |
| English | 685 | 883½ | 462 | 324½ | 277 | 409 | 459 | 3,500 |
| Latin | 568 | 787½ | 427½ | 296½ | 259½ | 357 | 376 | 3,072 |
| History | 471½ | 621½ | 344 | 252½ | 210 | 309 | 330½ | 2,539 |
| Commercial course | 328 | 507½ | 340 | 260 | 238½ | 472 | 800 | 2,446 |
| German | 383½ | 523½ | 289½ | 225 | 185½ | 270 | 379 | 2,256 |
| Algebra | 270 | 349 | 184 | 129 | 105 | 157 | 196½ | 1,390½ |
| Geometry | 251½ | 326½ | 171½ | 120 | 101½ | 144 | 160½ | 1,275½ |
| Manual training | 166 | 242½ | 129½ | 109½ | 115½ | 210 | 291½ | 1,264½ |
| Physics | 174½ | 221 | 114 | 77½ | 68 | 98½ | 121½ | 875 |
| Domestic science | 129½ | 193½ | 96 | 75½ | 82 | 122 | 111½ | 810 |
| Chemistry | 108 | 148 | 98½ | 70 | 62½ | 94½ | 113 | 689½ |
| Cooking | 123½ | 144 | 72 | 69½ | 70 | 93½ | 109½ | 682 |
| Drawing | 57 | 94 | 52 | 60 | 57½ | 78½ | 285 | 684 |
| Sewing | 105½ | 134 | 71½ | 60 | 68 | 84 | 128½ | 651½ |
| Normal subjects | 212½ | 183 | 75 | 46½ | 54½ | 35 | 36 | 642½ |
| Agriculture | 174½ | 159 | 74 | 36 | 40½ | 32 | 11 | 527 |
| Botany | 106 | 128½ | 66 | 53 | 43½ | 68½ | 72 | 537½ |
| French | 27½ | 36 | 20 | 27 | 34 | 74 | 231½ | 450 |
| Physical Geography | 80 | 117 | 61½ | 36½ | 42½ | 54½ | 65 | 457 |
| Music | 69½ | 82 | 44 | 48½ | 31½ | 47 | 97 | 419½ |
| Civics | 86½ | 95½ | 53 | 34½ | 30 | 45½ | 53½ | 398½ |
| Physiology | 61 | 69½ | 32 | 27 | 25 | 37 | 61 | 312½ |
| Zoology | 30½ | 51½ | 30 | 24 | 22½ | 41½ | 42½ | 242½ |
| Education | 64½ | 72½ | 29 | 16 | 13 | 13½ | 12 | 220½ |
| Other subjects | 71 | 57½ | 41½ | 29½ | 33 | 53 | 91 | 376½ |
| Total | 4,805 | 6,223 | 3,378 | 2,508 | 2,270½ | 3,400½ | 4,134½ | 26,719½ |
| Number of schools reporting | 184 | 223 | 118 | 83 | 68 | 91 | 102 | 869 |

| Number of units of— | Enrollment. | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1–100 | 101–200 | 201–300 | 301–500 | 501–1,000 | 1,001 and over. | Total. |
| English | 347 | 1,330½ | 697 | 595½ | 306½ | 211½ | 3,488 |
| Latin | 293 | 1,158½ | 634 | 544 | 265½ | 166 | 3,061 |
| History | 238 | 940½ | 520½ | 447 | 234½ | 149½ | 2,530 |
| Commercial course | 129 | 675 | 551½ | 568 | 336 | 183½ | 2,443 |
| German | 215 | 783½ | 438 | 413½ | 243½ | 157½ | 2,251 |
| Algebra | 145½ | 524 | 271½ | 235½ | 121½ | 88 | 1,386 |
| Geometry | 129½ | 489 | 250½ | 218½ | 109½ | 75½ | 1,272½ |
| Manual training | 59½ | 320½ | 242 | 270 | 176 | 193½ | 1,261½ |
| Physics | 74 | 336 | 175 | 149 | 81½ | 56½ | 872 |
| Domestic science | 48½ | 258½ | 165 | 163½ | 103 | 65½ | 804 |
| Chemistry | 62 | 208½ | 146½ | 134½ | 81 | 54 | 686½ |
| Cooking | 45 | 207 | 136 | 138 | 87 | 66 | 679 |
| Drawing | 44 | 129 | 95 | 121 | 127 | 166 | 682 |
| Sewing | 49½ | 179½ | 120½ | 131 | 97 | 69 | 646½ |
| Normal subjects | 24½ | 264½ | 182½ | 123 | 25 | 21 | 640½ |
| Agriculture | 39½ | 237½ | 130½ | 94 | 15 | 7½ | 524 |
| Botany | 44 | 199½ | 101 | 100½ | 54½ | 37½ | 537 |
| French | 73 | 73½ | 32 | 75 | 88½ | 108 | 450 |
| Physical geography | 32 | 168 | 90½ | 81 | 48 | 37½ | 457 |
| Music | 32½ | 128 | 63 | 81½ | 66 | 45 | 416 |
| Civics | 36 | 152½ | 81½ | 65 | 39 | 23 | 397 |
| Physiology | 24½ | 105 | 54 | 56 | 35 | 35½ | 310 |
| Zoology | 14½ | 73 | 41½ | 51 | 33 | 27 | 240 |
| Education | 16½ | 108½ | 44 | 34½ | 9½ | 6½ | 219½ |
| Other subjects | 32½ | 124½ | 49 | 65 | 47 | 57½ | 375½ |
| Total | 2,249 | 9,174½ | 5,312½ | 4,955½ | 2,830 | 2,108 | 26,629½ |
| Number of schools reporting | 93 | 345 | 173 | 145 | 69 | 41 | 866 |

Table L, derived from Table XLIX, is a table of percentages and is consequently superior for purposes of comparison. We shall therefore pass to it. It is read as follows: 13.3 per cent of the units of work given in the 122 schools reporting from Illinois are English, 10.7 per cent Latin, 9.1 per cent history, and so on.

TABLE L.

| Per cent of units of— | State. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. |
| English | 13.3 | 12.8 | 12.6 | 11.1 | 13.4 | 11.6 | 12.6 |
| Latin | 10.7 | 11.1 | 12.1 | 10.6 | 10.9 | 10.1 | 11.6 |
| History | 9.1 | 9.8 | 8.6 | 9.4 | 10.6 | 7.6 | 10.5 |
| Commercial course | 9.6 | 8.0 | 7.1 | 9.1 | 11.7 | 7.2 | 5.8 |
| German | 8.0 | 10.4 | 7.2 | 7.4 | 8.4 | 6.4 | 8.4 |
| Algebra | 5.0 | 5.0 | 5.3 | 4.9 | 5.6 | 4.3 | 5.7 |
| Geometry | 4.6 | 4.8 | 4.7 | 4.7 | 4.8 | 4.2 | 4.9 |
| Manual training | 5.8 | 4.6 | 5.2 | 4.3 | 4.0 | 7.6 | 3.6 |
| Physics | 3.1 | 3.1 | 3.3 | 3.3 | 3.3 | 2.8 | 3.0 |
| Domestic science | 2.7 | 3.5 | 4.0 | 3.1 | 2.2 | 4.0 | 2.9 |
| Chemistry | 2.8 | 2.7 | 1.4 | 1.5 | 3.4 | 2.8 | 2.5 |
| Cooking | 2.4 | 3.2 | 3.6 | 2.8 | 1.9 | 3.6 | 2.3 |
| Drawing | 4.4 | 3.6 | 1.2 | 1.8 | 2.5 | 2.4 | 3.6 |
| Sewing | 2.5 | 3.2 | 2.6 | 2.8 | 2.1 | 3.5 | 3.1 |
| Normal subjects | .6 | .2 | 7.0 | 7.4 | .8 | 6.3 | 1.2 |
| Agriculture | .8 | 1.2 | 2.2 | 2.9 | 2.0 | 4.6 | 1.7 |
| Botany | 1.8 | 2.5 | 1.9 | 2.7 | 2.2 | 1.8 | 1.3 |
| French | 2.4 | 1.4 | .4 | .5 | 2.5 | 1.1 | 3.8 |
| Physical geography | 1.6 | 1.2 | 1.6 | 1.4 | 2.4 | 1.4 | 1.4 |
| Music | 2.0 | 3.1 | 1.1 | 1.9 | 1.4 | 1.0 | 2.0 |
| Civics | 1.5 | 1.5 | 1.6 | 1.7 | 1.1 | 1.5 | 1.0 |
| Physiology | 1.7 | .7 | 1.5 | 1.7 | .7 | 1.1 | .8 |
| Zoology | 1.7 | .7 | 1.1 | .6 | 1.1 | 1.0 | .8 |
| Education | .4 | .1 | 1.9 | 1.3 | .1 | .1 | 3.3 |
| Other subjects | 1.5 | 1.6 | .8 | 1.1 | .9 | 2.0 | 2.2 |

| Per cent of units of— | State. | | | | | |
|---|---|---|---|---|---|---|
| | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. |
| English | 13.2 | 13.7 | 14.3 | 13.4 | 15.5 | 13.4 |
| Latin | 12.3 | 10.0 | 13.9 | 12.7 | 12.3 | 11.0 |
| History | 9.7 | 8.2 | 9.4 | 11.3 | 9.7 | 10.1 |
| Commercial course | 7.5 | 11.0 | 9.7 | 9.6 | 7.9 | 11.1 |
| German | 9.2 | 7.2 | 10.3 | 7.0 | 9.4 | 8.5 |
| Algebra | 6.0 | 4.7 | 6.0 | 5.3 | 5.4 | 4.5 |
| Geometry | 5.7 | 4.7 | 5.5 | 4.7 | 5.6 | 4.1 |
| Manual training | 3.0 | 5.6 | 3.0 | 4.8 | 5.0 | 5.5 |
| Physics | 3.8 | 3.2 | 3.7 | 3.1 | 3.3 | 3.4 |
| Domestic science | 2.2 | 3.1 | 1.7 | 4.1 | 3.7 | 4.9 |
| Chemistry | 3.1 | 2.4 | 3.2 | 2.2 | 2.7 | 1.9 |
| Cooking | 2.0 | 3.5 | 1.3 | 4.0 | 1.9 | 2.9 |
| Drawing | .9 | 2.2 | 2.8 | 2.0 | 1.2 | 1.0 |
| Sewing | 1.1 | 3.7 | 1.2 | 3.4 | 2.0 | 2.6 |
| Normal subjects | 4.9 | 1.4 | .4 | .5 | .9 | 1.4 |
| Agriculture | 3.0 | 2.2 | 1.4 | 1.5 | 1.6 | 2.0 |
| Botany | 2.1 | 2.4 | 1.6 | 1.6 | 2.3 | 2.4 |
| French | .5 | .4 | 2.6 | .2 | .8 | .9 |
| Physical geography | 1.8 | 1.6 | 1.8 | 2.1 | 2.1 | 2.1 |
| Music | 1.6 | 1.5 | 1.2 | 2.0 | 1.3 | .7 |
| Civics | 1.8 | 1.8 | 1.8 | 1.5 | 1.6 | 1.5 |
| Physiology | 1.0 | 1.2 | .9 | .6 | 1.5 | 1.4 |
| Zoology | .4 | 1.1 | .5 | .9 | .9 | .4 |
| Education | 2.1 | 2.0 | .1 | .4 | .3 | 1.1 |
| Other subjects | 1.1 | 1.2 | 1.7 | 1.1 | 1.1 | 1.2 |

TABLE L—Continued.

| Per cent of units of— | Population. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Under 2,500 | 2,501-5,000 | 5,001-7,500 | 7,501-10,000 | 10,001-15,000 | 15,001-50,000 | 50,001 and over. |
| English | 14.3 | 14.2 | 13.6 | 12.8 | 12.1 | 12.0 | 11.1 |
| Latin | 11.8 | 12.7 | 12.6 | 11.7 | 11.4 | 10.5 | 9.1 |
| History | 9.8 | 10.0 | 10.1 | 10.0 | 9.2 | 9.1 | 8.0 |
| Commercial course | 6.8 | 8.1 | 10.0 | 10.3 | 10.4 | 13.8 | 7.2 |
| German | 8.0 | 8.4 | 8.5 | 8.9 | 8.2 | 8.0 | 9.2 |
| Algebra | 5.6 | 5.6 | 5.5 | 5.1 | 4.7 | 4.6 | 4.7 |
| Geometry | 5.2 | 5.2 | 5.1 | 4.8 | 4.5 | 4.2 | 3.9 |
| Manual training | 3.5 | 3.9 | 3.8 | 4.4 | 5.1 | 6.2 | 7.0 |
| Physics | 3.6 | 3.6 | 3.4 | 3.1 | 3.0 | 2.9 | 3.0 |
| Domestic science | 2.7 | 3.1 | 2.8 | 3.0 | 3.6 | 3.6 | 2.7 |
| Chemistry | 2.3 | 2.4 | 2.9 | 2.8 | 2.8 | 2.8 | 2.7 |
| Cooking | 2.6 | 2.3 | 2.1 | 2.8 | 3.1 | 2.8 | 2.6 |
| Drawing | 1.2 | 1.5 | 1.5 | 2.4 | 2.5 | 2.3 | 6.9 |
| Sewing | 2.2 | 2.2 | 2.1 | 2.4 | 3.0 | 2.5 | 3.1 |
| Normal subjects | 4.4 | 2.9 | 2.2 | 1.9 | 2.4 | 1.0 | .9 |
| Agriculture | 3.6 | 2.6 | 2.2 | 1.5 | 1.8 | .9 | .3 |
| Botany | 2.2 | 2.0 | 2.0 | 2.1 | 1.9 | 2.0 | 1.7 |
| French | .6 | .6 | .8 | 1.1 | 1.5 | 2.2 | 5.6 |
| Physical geography | 1.7 | 1.9 | 1.8 | 1.5 | 1.9 | 1.6 | 1.6 |
| Music | 1.4 | 1.3 | 1.3 | 2.0 | 1.4 | 1.4 | 2.4 |
| Civics | 1.8 | 1.5 | 1.6 | 1.4 | 1.3 | 1.3 | 1.3 |
| Physiology | 1.3 | 1.1 | 1.0 | 1.1 | 1.1 | 1.1 | 1.5 |
| Zoology | .6 | .8 | .9 | 1.0 | 1.0 | 1.2 | 1.0 |
| Education | 1.3 | 1.2 | .9 | .7 | .6 | .4 | .3 |
| Other subjects | 1.5 | .9 | 1.3 | 1.2 | 1.5 | 1.6 | 2.2 |

| Per cent of units of— | Enrollment. | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1-100 | 101-200 | 201-300 | 301-500 | 501-1,000 | 1,001 and over. | *Total.* |
| English | 15.3 | 14.5 | 13.1 | 12.0 | 10.7 | 10.0 | 13.1 |
| Latin | 13.0 | 12.6 | 11.9 | 11.0 | 9.4 | 7.9 | 11.5 |
| History | 10.6 | 10.3 | 9.8 | 9.0 | 8.2 | 7.1 | 9.5 |
| Commercial course | 5.6 | 7.4 | 10.4 | 11.4 | 11.9 | 8.7 | 9.2 |
| German | 9.6 | 8.5 | 8.3 | 8.3 | 8.6 | 7.4 | 8.5 |
| Algebra | 6.4 | 5.7 | 5.1 | 4.8 | 4.3 | 4.2 | 5.2 |
| Geometry | 5.8 | 5.3 | 4.7 | 4.4 | 3.9 | 3.6 | 4.8 |
| Manual training | 2.7 | 3.5 | 4.6 | 5.5 | 6.2 | 9.1 | 4.7 |
| Physics | 3.3 | 3.7 | 3.3 | 3.0 | 2.9 | 2.7 | 3.3 |
| Domestic science | 2.2 | 2.8 | 3.1 | 3.3 | 3.7 | 3.1 | 3.0 |
| Chemistry | 2.7 | 2.3 | 2.8 | 2.7 | 2.8 | 2.6 | 2.6 |
| Cooking | 2.0 | 2.3 | 2.6 | 2.8 | 3.1 | 3.2 | 2.5 |
| Drawing | 2.0 | 1.4 | 1.8 | 2.5 | 4.5 | 7.8 | 2.5 |
| Sewing | 2.2 | 1.9 | 2.3 | 2.7 | 3.4 | 3.3 | 2.4 |
| Normal subjects | 1.1 | 2.9 | 3.4 | 2.5 | .9 | 1.0 | 2.4 |
| Agriculture | 1.8 | 2.6 | 2.4 | 1.9 | .5 | .4 | 2.0 |
| Botany | 2.0 | 2.2 | 1.9 | 2.0 | 1.9 | 1.8 | 2.0 |
| French | 3.2 | .8 | .6 | 1.5 | 3.1 | 5.1 | 1.7 |
| Physical geography | 1.4 | 1.8 | 1.7 | 1.6 | 1.7 | 1.8 | 1.7 |
| Music | 1.5 | 1.4 | 1.2 | 1.7 | 2.3 | 2.1 | 1.6 |
| Civics | 1.6 | 1.7 | 1.5 | 1.3 | 1.4 | 1.1 | 1.5 |
| Physiology | 1.1 | 1.1 | 1.0 | 1.1 | 1.3 | 1.7 | 1.2 |
| Zoology | .7 | .8 | .8 | 1.0 | 1.2 | 1.3 | .9 |
| Education | .7 | 1.2 | .8 | .7 | .4 | .3 | .8 |
| Other subjects | 1.5 | 1.3 | .9 | 1.3 | 1.7 | 2.7 | 1.4 |

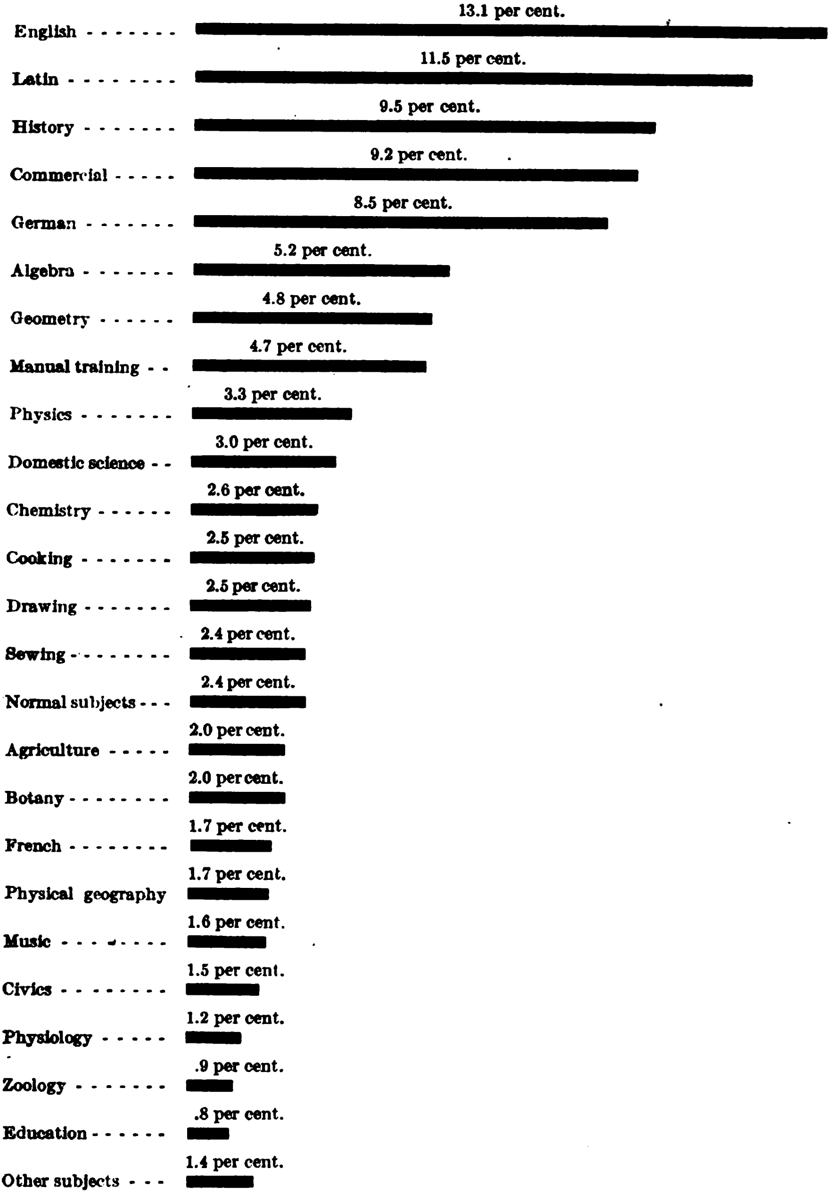

FIG. 16—Per cent of units given in each subject in 1913-14.

Since the number of comparisons to be made is almost unlimited, it must suffice to point out only the most significant. For the whole association, it is seen that English leads all other subjects with 13.1 per cent; that is, 13.1 per cent of all the units of work given in the schools of the association are English. Latin is second with 11.5 per cent, history third with 9.5 per cent, etc. This comparison is shown graphically in figure 16 much more clearly than is possible by the use of words.

A few of the significant variations from the order for the whole association as shown by figure 16 should be noted. English leads all the other subjects in every State without exception, in cities of all sizes except in those having populations ranging from 15,001 to 50,000, where it is surpassed by commercial subjects, and in schools of all sizes except in those having from 501 to 1,000 students, in which commercial subjects also rank first. It is interesting to note that, while Latin is holding its own in many schools, there is slightly more German given in the cities of the largest size than Latin. In every other case, however, Latin still leads German. Another interesting variation is found in manual training. While for the entire association this subject ranks eighth, in schools of the largest size it ranks second.

As just remarked, English is uniformly high in practically every group of schools. There is, however, considerable variation in the percentage from State to State, and the percentage steadily decreases as the size of city and size of school increases. About the same statement holds for Latin, history, algebra, geometry, and physics. The percentage for commercial subjects varies greatly from State to State, from as low as 5.8 per cent in Missouri to 11.7 per cent in Michigan, and it increases with the size of city up to the group of cities of the largest size, where it drops from 13.8 per cent to 7.2 per cent. This is probably due to the presence in the large cities of numerous business colleges and private schools which take over this feature of the work of the high school. The percentage of manual training, drawing, domestic science, sewing, zoology, and French show considerable variation from State to State, and increase with the size of city and size of school. There is, however, an interesting exception in the case of French which seems to be given quite frequently in schools of the smallest size. The amount of agriculture given ranges among the States from 0.8 per cent in Illinois to 4.6 per cent in Minnesota, decreases with the increase of the size of the group of cities from 3.6 per cent to 0.3 per cent, and is greater in the schools of medium size than in either the very smallest or the larger schools. This shows a tendency on the part of the school to meet the needs of the community. The case of normal subjects is very similar to that of agriculture, and is explained in the same way. The teachers of the rural schools come largely from the high schools of the smaller cities, and not from the larger cities. The percentage of educational subjects varies a great deal from State to State, and decreases more or less regularly with the increase of the size of the city and the size of the school. The remaining subjects—German, cooking, physical geography, physiology, civics, chemistry, botany, and music—while varying to some degree in the various groups of schools are on the whole fairly uniform. German is to a slight degree an exception to this statement, for its percentage decreases with the increase in the size of school.

In Table LI, English, Latin, and modern foreign languages are compared. The percentages are taken from the previous table. The table is read thus: 13.3 per cent of the units of work given in the schools reporting from Illinois are English, 10.7 per cent Latin, and 10.4 per cent modern languages, and the total language group represents 34.4 per cent. English still ranks first in every State, but Latin does not rank second in every State. In Missouri and Illinois there are more units of modern languages given than there are of Latin, while in Michigan the percentages are equal. In the largest cities the modern languages easily lead both English and Latin, as is also true in the group composed of schools of the next size smaller. The interesting point brought out by the table is the increase of the percentage of units of modern languages with the increase in population and enrollment.

TABLE LI.

| Per cent of units of— | State. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. |
| English | 13.3 | 12.8 | 12.6 | 11.1 | 13.4 | 11.6 | 12.6 |
| Latin | 10.7 | 11.1 | 12.1 | 10.6 | 10.9 | 10.1 | 11.6 |
| Modern languages | 10.4 | 11.8 | 7.6 | 7.9 | 10.9 | 7.5 | 12.2 |
| Total languages | 34.4 | 35.7 | 32.3 | 29.6 | 35.2 | 29.2 | 36.4 |

| Per cent of units of— | State. | | | | | |
|---|---|---|---|---|---|---|
| | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. |
| English | 13.2 | 13.7 | 14.3 | 13.4 | 15.5 | 13.4 |
| Latin | 12.3 | 10.0 | 13.9 | 12.7 | 12.3 | 11.0 |
| Modern languages | 9.7 | 7.6 | 12.9 | 7.2 | 10.2 | 9.4 |
| Total languages | 35.2 | 31.3 | 41.1 | 33.3 | 38.0 | 33.8 |

| Per cent of units of— | Population. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Under 2,500 | 2,501-5,000 | 5,001-7,500 | 7,501-10,000 | 10,001-15,000 | 15,001-50,000 | 50,001 and over. |
| English | 14.3 | 14.2 | 13.6 | 12.8 | 12.1 | 12.0 | 11.1 |
| Latin | 11.8 | 12.7 | 12.6 | 11.7 | 11.4 | 10.5 | 9.1 |
| Modern languages | 8.6 | 9.0 | 9.3 | 10.0 | 9.7 | 10.2 | 14.8 |
| Total languages | 34.7 | 35.9 | 35.5 | 34.5 | 33.2 | 32.7 | 35.0 |

### TABLE LI—Continued.

| Per cent of units of— | Enrollment. | | | | | | Total. |
|---|---|---|---|---|---|---|---|
| | 1-100 | 101-200 | 201-300 | 301-500 | 501-1,000 | 1,001 and over. | |
| English | 15.3 | 14.5 | 13.1 | 12.0 | 10.7 | 10.0 | 13.1 |
| Latin | 13.0 | 12.6 | 11.9 | 11.0 | 9.4 | 7.9 | 11.5 |
| Modern languages | 12.8 | 9.3 | 8.9 | 9.8 | 11.7 | 12.5 | 10.2 |
| Total languages | 41.1 | 36.4 | 33.9 | 32.8 | 31.8 | 30.4 | 34.8 |

Table LII gives a comparison of total science and total mathematics, the percentages being taken from Table L. It should be read as follows: 12.7 per cent of the total number of units of work given in the schools reporting from Illinois are science, 9.6 per cent are mathematics, and science and mathematics combined give 22.3 per cent. The table shows that the amount of science given is comparatively uniform from State to State and changes but little with the increase of either population or enrollment. Mathematics, on the other hand, decreases with the increase of either population or enrollment, and seems to be most affected by the latter.

### TABLE LII.

| Per cent of units of— | State. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. |
| Science | 12.7 | 10.9 | 10.8 | 11.2 | 13.1 | 10.9 | 9.8 |
| Mathematics | 9.6 | 9.8 | 10.0 | 9.6 | 10.4 | 8.5 | 10.6 |
| Total science and mathematics | 22.3 | 20.7 | 20.8 | 20.8 | 23.5 | 19.4 | 20.4 |

| Per cent of units of— | State. | | | | | |
|---|---|---|---|---|---|---|
| | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. |
| Science | 12.2 | 11.9 | 11.7 | 10.5 | 12.8 | 11.6 |
| Mathematics | 11.7 | 9.4 | 11.5 | 10.0 | 11.0 | 8.6 |
| Total science and mathematics | 23.9 | 21.3 | 23.2 | 20.5 | 23.8 | 20.2 |

| Per cent of units of— | Population. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Under 2,500. | 2,501-5,000 | 5,001-7,500 | 7,501-10,000 | 10,001-15,000 | 15,001-50,000 | 50,001 and over. |
| Science | 11.7 | 11.8 | 12.0 | 11.6 | 11.7 | 11.6 | 11.5 |
| Mathematics | 10.8 | 10.8 | 10.6 | 9.9 | 9.2 | 8.8 | 8.6 |
| Total science and mathematics | 22.5 | 22.6 | 22.6 | 21.5 | 20.9 | 20.4 | 20.1 |

TABLE LII—Continued.

| Per cent of units of— | Enrollment. | | | | | | Total. |
|---|---|---|---|---|---|---|---|
| | 1-100 | 101-200 | 201-300 | 301-500 | 501-1,000 | 1,001 and over. | |
| Science | 11.2 | 11.9 | 11.5 | 11.4 | 11.8 | 11.9 | 11.7 |
| Mathematics | 12.2 | 11.0 | 9.8 | 9.2 | 8.2 | 7.8 | 10.0 |
| Total science and mathematics | 23.4 | 22.9 | 21.3 | 20.6 | 20.0 | 19.7 | 21.7 |

In Table LIII the technical subjects for boys—manual training, drawing, and agriculture; the technical subjects for girls—cooking, domestic science, and sewing; and commercial subjects are compared. Since it is identical in form with the immediately preceding tables, it need not be explained. It will be noticed that in some States the subjects for boys seem to have the best foothold, while in others it is exactly the other way around, and there seems to be but little relation between them. Yet, in those parts of the table based upon population and enrollment, with but one exception, the percentage favors the subjects for boys; and both the subjects for boys and the subjects for girls increase with the population and the enrollment.

TABLE LIII.

| Per cent of units of— | State. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. |
| Technical subjects: | | | | | | | |
| For boys | 11.0 | 9.4 | 8.6 | 9.0 | 8.5 | 14.6 | 8.9 |
| For girls | 7.6 | 9.9 | 10.2 | 8.7 | 6.2 | 11.1 | 8.3 |
| Commercial course | 9.6 | 8.0 | 7.1 | 9.1 | 11.7 | 7.2 | 5.8 |
| Total technical subjects | 28.2 | 27.3 | 25.9 | 26.8 | 26.4 | 32.9 | 23.0 |

| Per cent of units of— | State. | | | | | |
|---|---|---|---|---|---|---|
| | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. |
| Technical subjects: | | | | | | |
| For boys | 6.9 | 10.0 | 7.2 | 8.3 | 7.8 | 8.5 |
| For girls | 5.3 | 10.3 | 4.2 | 11.5 | 7.6 | 10.4 |
| Commercial course | 7.5 | 11.0 | 9.7 | 9.6 | 7.9 | 11.1 |
| Total technical subjects | 19.7 | 31.3 | 21.1 | 29.4 | 23.3 | 30.0 |

| Per cent of units of— | Population. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Under 2,500. | 2,501-5,000 | 5,001-7,500 | 7,501-10,000 | 10,001-15,000 | 15,001-50,000 | 50,001 and over. |
| Technical subjects: | | | | | | | |
| For boys | 8.3 | 8.0 | 7.5 | 8.3 | 9.4 | 9.4 | 14.2 |
| For girls | 7.5 | 7.6 | 7.0 | 8.2 | 9.7 | 8.9 | 8.4 |
| Commercial course | 6.8 | 8.1 | 10.0 | 10.3 | 10.4 | 13.8 | 7.2 |
| Total technical subjects | 22.6 | 23.7 | 24.5 | 26.8 | 29.5 | 32.1 | 29.8 |

TABLE LIII—Continued.

| Per cent of units of— | Enrollment. | | | | | | Total. |
|---|---|---|---|---|---|---|---|
| | 1-100 | 101-200 | 201-300 | 301-500 | 501-1,000 | 1,001 and over. | |
| Technical subjects: | | | | | | | |
| For boys | 6.5 | 7.5 | 8.8 | 9.9 | 11.2 | 17.3 | 9.2 |
| For girls | 6.4 | 7.0 | 8.0 | 8.8 | 10.2 | 9.6 | 7.9 |
| Commercial course | 5.6 | 7.4 | 10.4 | 11.4 | 11.9 | 8.7 | 9.2 |
| Total technical subjects | 18.5 | 21.9 | 27.2 | 30.1 | 33.3 | 35.6 | 26.3 |

In Table LIV the four groups of subjects are compared—total languages, total science and mathematics, total history and civics, and total technical subjects. The total "other subjects" is also given. The table is read in the same way as the previous tables.

TABLE LIV.

| Per cent of units of— | State. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. |
| Total languages | 34.4 | 35.7 | 32.3 | 29.6 | 35.2 | 29.2 | 36.4 |
| Total technical subjects | 28.2 | 27.3 | 25.9 | 26.8 | 26.4 | 32.9 | 23.0 |
| Total science and mathematics | 22.3 | 20.7 | 20.8 | 20.8 | 23.5 | 19.4 | 20.4 |
| Total history and civics | 10.6 | 11.3 | 10.2 | 11.1 | 11.7 | 9.1 | 11.5 |
| Total other subjects | 4.5 | 5.0 | 10.8 | 11.7 | 3.2 | 9.4 | 8.7 |

| Per cent of units of— | State. | | | | | |
|---|---|---|---|---|---|---|
| | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. |
| Total languages | 35.2 | 31.3 | 41.1 | 33.3 | 38.0 | 33.8 |
| Total technical subjects | 19.7 | 31.3 | 21.1 | 29.4 | 23.3 | 30.0 |
| Total science and mathematics | 23.9 | 21.3 | 23.2 | 20.5 | 23.8 | 20.2 |
| Total history and civics | 11.5 | 10.0 | 11.2 | 12.8 | 11.3 | 11.6 |
| Total other subjects | 9.7 | 6.1 | 3.4 | 4.0 | 3.6 | 4.4 |

| Per cent of units of— | Population. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Under 2,500. | 2,501-5,000 | 5,001-7,500 | 7,501-10,000 | 10,001-15,000 | 15,001-50,000 | 50,001 and over. |
| Total languages | 34.7 | 35.9 | 35.5 | 34.5 | 33.2 | 32.7 | 35.0 |
| Total technical subjects | 22.6 | 23.7 | 24.5 | 26.8 | 29.5 | 32.1 | 29.8 |
| Total science and mathematics | 22.5 | 22.6 | 22.6 | 21.5 | 20.9 | 20.4 | 20.1 |
| Total history and civics | 11.6 | 11.5 | 11.7 | 11.4 | 10.5 | 10.4 | 9.3 |
| Total other subjects | 8.6 | 6.3 | 5.7 | 5.8 | 5.9 | 4.4 | 5.8 |

| Per cent of units of— | Enrollment. | | | | | | Total. |
|---|---|---|---|---|---|---|---|
| | 1-100 | 101-200 | 201-300 | 301-500 | 501-1,000 | 1,001 and over. | |
| Total languages | 41.1 | 36.4 | 33.9 | 32.8 | 31.8 | 30.4 | 34.8 |
| Total technical subjects | 18.5 | 21.9 | 27.2 | 30.1 | 33.3 | 35.6 | 26.3 |
| Total science and mathematics | 23.4 | 22.9 | 21.3 | 20.6 | 20.0 | 19.7 | 21.7 |
| Total history and civics | 12.2 | 12.0 | 11.3 | 10.3 | 9.6 | 8.2 | 11.0 |
| Total other subjects | 4.8 | 6.8 | 6.3 | 6.2 | 5.8 | 6.1 | 6.2 |

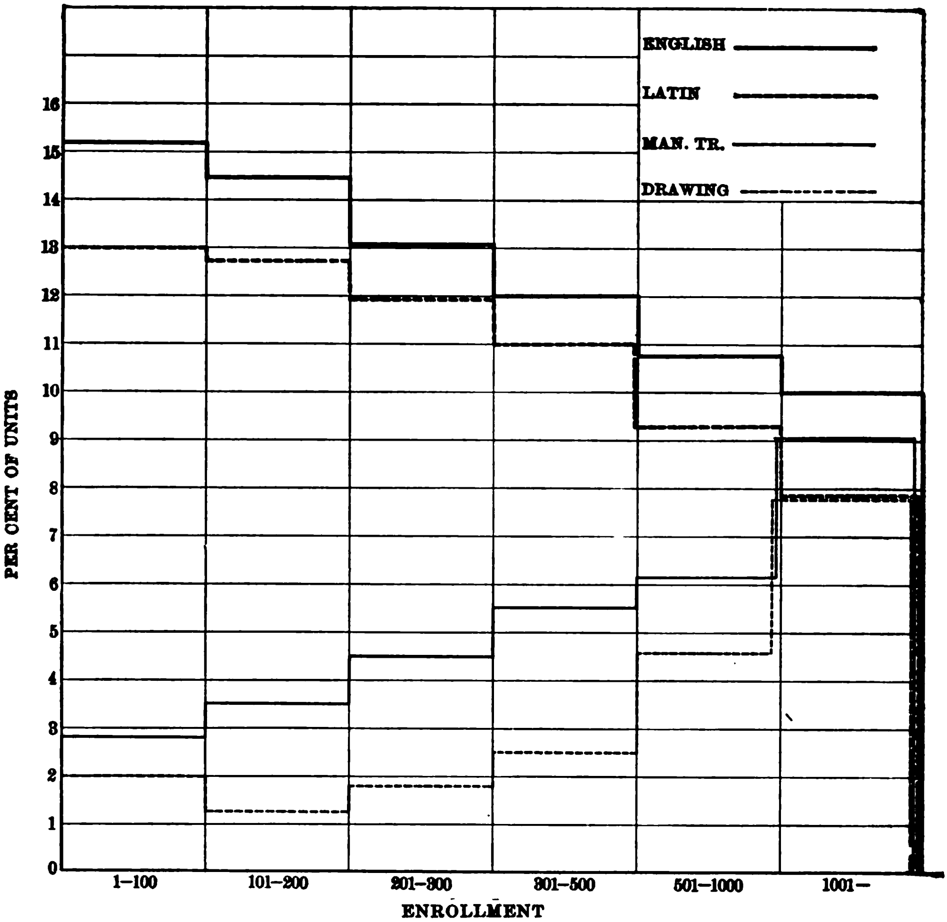

FIG. 17.—Percentages of English, Latin, manual training, and drawing in schools of different enrollments.

The table shows that science and mathematics and history and civics vary but little from one group of schools to another. The great differences occur in the language group and in the technical subjects. The percentage of units of language ranges from 29.2 per cent in Minnesota to 41.1 per cent in Ohio, a rather wide range; while for the technical subjects it ranges from 19.7 per cent in Nebraska to 32.9 per cent in Minnesota. In a general way, those States which exhibit weakness in the one group show strength in the other. The languages show but little change with an increase in population, while their percentage decreases considerably with the increase in the size of the school. The opposite holds true for the technical subjects, except that in this case the percentage does not remain unchanged with the increase in the size of the city, but increases more or less constantly with it.

The relation between enrollment and the percentage of units offered in the various subjects is brought out very clearly in figures 17 and 18. The four curves in figure 17 represent the percentages of English, Latin, manual training, and drawing given in the six groups of schools when they are grouped according to enrollment. The distance above the horizontal line indicates the percentage of units offered, while the distance along the horizontal line has been divided into six divisions corresponding to the six groups of schools. Figure 18 is of a similar character, differing in that the four curves here represent the percentages of units given in total languages, total science and mathematics, total technical subjects, and total history and civics.

From the foregoing it is evident that in the smaller schools there is a tendency to cling to the more or less traditional subjects; that is, those subjects which have come to be generally accepted as the proper subjects for a high-school course of study. The innovations occur in the large schools. They are the progressive schools. Consequently from these schools it may be possible to get some idea of the trend of the times. It should not be inferred from what has been said, however, that the larger schools introduce new subjects at the expense of the older subjects, for such is not the case. The large school practically always offers as large, and frequently a larger, number of units of the older subjects than does the small school, but it offers the other subjects also. This causes the percentage of units of the older subjects to drop. The large school offers all that the small school offers and then offers some additional subjects.

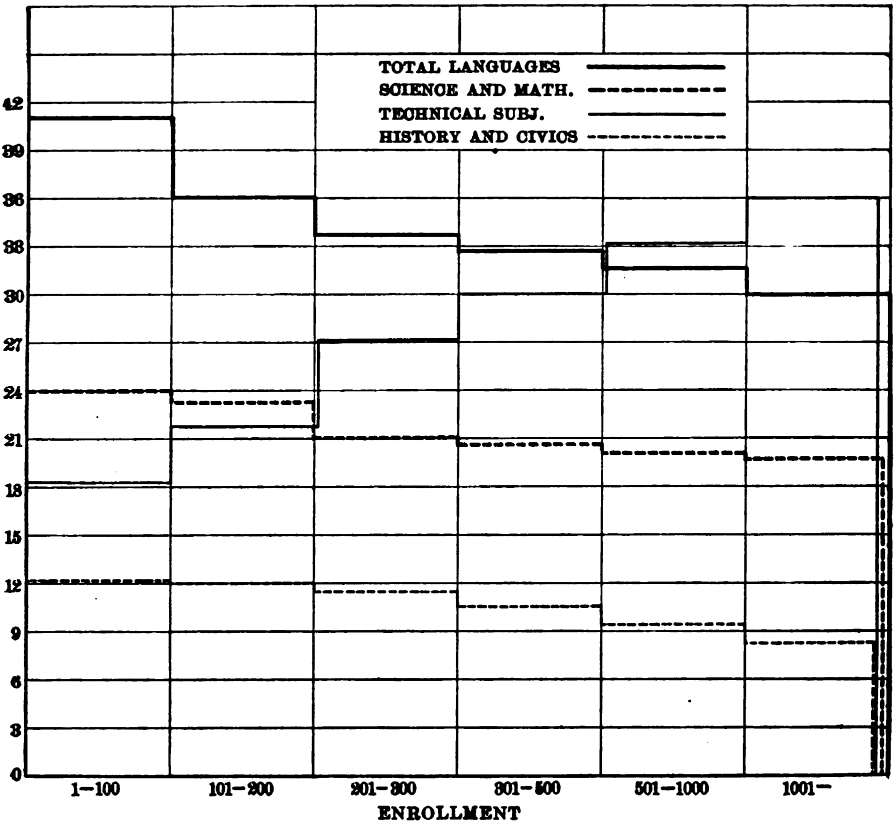

FIG. 18.—Percentage of units given in total languages, total science and mathematics, etc., in schools of different enrollments.

TABLE LV.—*Table of medians.*

| Median. | State. | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Colorado. | Illinois. | Indiana. | Iowa. | Kansas. | Michigan. | Minnesota. | Missouri. |
| Enrollment | ........ | 220 | 243 | 216 | 190 | 217 | 195 | 177 |
| Number of students per class | ........ | 21.5 | 18.5 | 20 | 26 | 19 | 20 | 21 |
| Number of students per teacher | ........ | 20 | 19 | 19 | 20 | 20 | 17 | 20 |
| Number of periods taught by superintendent | ........ | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Number of periods taught by principal | ........ | 2 | 3 | 3 | 4 | 3 | 4 | 3 |
| Number of periods taught by teacher | ........ | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Number of periods supervised | 6 | 6 | 3 | 4 | 6 | 3 | 3 | 2 |
| Number of weeks of 5 days each in school year. | ........ | 38 | 36 | 36 | 36 | 39 | 36 | 36 |
| Number of recitation periods in daily program | ........ | 7 | 7 | 7 | 8 | 7 | 7 | 7 |
| Number of minutes in recitation period | ........ | 43 | 40 | 43 | 40 | 42 | 40 | 43 |
| Number of daily recitations per school | ........ | 66 | 68 | 54 | 54 | 57 | 66 | 73 |
| Salary of teachers | $1,032 | $1,103 | $906 | $768 | $797 | $874 | $960 | $1,120 |
| Salary of principal | $1,550 | $1,825 | $1,400 | $1,142 | $1,283 | $1,325 | $1,183 | $1,263 |
| Salary of superintendent | $1,950 | $1,983 | $1,825 | $1,650 | $1,694 | $1,857 | $1,893 | $1,550 |
| Value of equipment for physics, commercial course, chemistry, cooking, botany, sewing, zoology, agriculture | $3,250 | $3,470 | $2,695 | $2,255 | $2,240 | $2,890 | $2,885 | $2,950 |
| Number of recitation, laboratory, manual training, domestic science, and assembly rooms | 13 | 17 | 15 | 15 | 13 | 15 | 16 | 12 |
| Number of volumes in high school library exclusive of Government reports and encyclopedias | 807 | 797 | 606 | 531 | 557 | 820 | 919 | 708 |

| Median. | State. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Montana. | Nebraska. | North Dakota. | Ohio. | Oklahoma. | South Dakota. | Wisconsin. |
| Enrollment | ........ | 148 | 106 | 235 | 192 | 156 | 188 |
| Number of students per class | ........ | 19 | 15.5 | 22 | 19 | 19 | 20.5 |
| Number of students per teacher | ........ | 20 | 12 | 23 | 21 | 16 | 19 |
| Number of periods taught by superintendent | ........ | 1 | 1 | 0 | 0 | 1 | 0 |
| Number of periods taught by principal | ........ | 4 | 4 | 3 | 3 | 3 | 2 |
| Number of periods taught by teacher | ........ | 5 | 5 | 5 | 5 | 5 | 5 |
| Number of periods supervised | 6 | 6 | 5 | 4 | 6 | 6 | 6 |
| Number of weeks of 5 days each in school year | 36 | 36 | 36 | 36 | 36 | 36 | 36 |
| Number of recitation periods in daily program | 7 | 7 | 7 | 7 | 7 | 8 | 7 |
| Number of minutes in recitation period | 40 | 40 | 42 | 43 | 42 | 43 | 41 |
| Number of daily recitations per school | ........ | 36 | 37 | 63 | 49 | 46 | 56 |
| Salary of teachers | $1,238 | $752 | $853 | $1,008 | $797 | $868 | $828 |
| Salary of principal | $2,050 | $1,020 | $1,228 | $1,306 | $1,375 | $1,266 | $1,722 |
| Salary of superintendent | $2,250 | $1,663 | $1,775 | $1,725 | $2,700 | $1,750 | $1,863 |
| Value of equipment for physics, commercial course, chemistry, cooking, botany, sewing, zoology, agricultural | $5,595 | $1,705 | $2,500 | $3,070 | $2,715 | $2,555 | $2,870 |
| Number of recitation, laboratory, manual training, domestic science, and assembly rooms | 18 | 10 | 9 | 12 | 13 | 11 | 15 |
| Number of volumes in high school library exclusive of Government reports and encyclopedias | 811 | 313 | 781 | 512 | 506 | 1,018 | 769 |

| Median. | Population. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Under 2,500 | 2,501–5,000 | 5,001–7,500 | 7,501–10,000 | 10,001–15,000 | 15,001–50,000 | 50,001 and over. |
| Enrollment | 126 | 176 | 210 | 273 | 335 | 459 | 742 |
| Number of students per teacher | 17 | 19 | 20 | 20 | 21 | 21 | 23 |
| Number of periods taught by superintendent | 2 | 1 | 0 | 0 | 0 | 0 | 0 |
| Number of periods taught by principal | 4 | 4 | 3 | 3 | 2 | 1 | 0 |
| Salary of teachers | $723 | $765 | $793 | $861 | $906 | $970 | $1,381 |
| Salary of principal | $1,058 | $1,140 | $1,292 | $1,445 | $1,587 | $2,005 | $3,014 |
| Salary of superintendent | $1,628 | $1,750 | $1,950 | $2,000 | $2,290 | $2.700 | ........ |

TABLE LV.—*Table of medians*—Continued.

| Median. | Enrollment. | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1-100 | 101-200 | 201-300 | 301-500 | 501-1,000 | 1,001 and over. | Total. |
| Enrollment | | | | | | | 200 |
| Number of students per class | 12.5 | 17 | 19.5 | 21 | 22 | 24 | 20 |
| Number of students per teacher | 11 | 18 | 21 | 22 | 22 | 26 | 20 |
| Number of periods taught by superintendent | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| Number of periods taught by principal | 4 | 4 | 3 | 2 | 0 | 0 | 3 |
| Number of periods taught by teacher | 4 | 5 | 5 | 5 | 5 | 5 | 5 |
| Number of periods supervised | 0 | 4 | 5 | 6 | 8 | 13 | 5 |
| Number of weeks of 5 days each in school year | | | | | | | 36 |
| Number of recitation periods in daily program | | | | | | | 7 |
| Number of minutes in recitation period | | | | | | | 42 |
| Number of daily recitations per school | 27 | 34 | 50 | 72 | 122 | 227 | 59 |
| Salary of teachers | | | | | | | 919 |
| Salary of principal | | | | | | | $1,358 |
| Salary of superintendent | | | | | | | $1,821 |
| Value of equipment for physics, commercial course, chemistry, cooking, botany, sewing, zoology, agricultural | $2,085 | $1,985 | $2,600 | $3,875 | $6,565 | $10,755 | $2,750 |
| Number of recitation, laboratory, manual training domestic science, and assembly rooms | 8 | 11 | 14 | 20 | 30 | 50 | 13 |
| Number of volumes in high school library exclusive of Government reports, and encyclopedias | 550 | 535 | 658 | 818 | 1,288 | 2,241 | 653 |

## SUMMARY.

Although it is impossible to construct a table that would give anything like a complete summary of the facts brought out in the investigation, Table LV does represent a partial summary. The table is based upon medians. Consequently, since many of the features of the investigation can not be satisfactorily represented by medians without greatly increasing the bulk of the table, they are not found in this table. Furthermore, it should be borne in mind that the median gives only the central tendency of a series of variants, and its value, when completely isolated from the series for which it stands, is partly diminished. The fact that the median concerning a certain item is low for some particular group of schools does not mean that all the schools in the group are weak in that feature. It means that the majority of the schools are weak, but nothing more.

The table is read as follows: Beginning with the second column instead of the first, since Colorado is not consistently represented, we read that for the schools reporting from Illinois, the median enrollment is 220, the median number of students per class 21.5, the median number of students per teacher 20, etc.

In general it may be said that in matters of material equipment, library facilities, and salary of teachers, the large schools are superior to the small schools; while the small schools adhere more closely to the standards set up by the association regarding the number of students per teacher and size of classes. Owing to the larger salaries paid in the large cities, the instructorial staff here is found to be composed of more experienced teachers and is more stable so far as tenure is concerned. In experimenting along educational lines, in trying out new ideas, the large schools take the lead. As a general rule, they are the progressive schools.

For the purpose of making a comparison among the States concerning salaries, material equipment, and library facilities, Table LVI has been prepared. It is based upon medians taken from the preceding table. The method adopted was to rank the 15 States from highest to lowest for each of the six items represented in the table. It is understood when read thus: The schools of Montana rank first in the median salary paid to teachers, that is, the median salary of teachers is higher in Montana than in any other State; they rank first in median salary paid to principals, second in salary of superintendents, etc.

TABLE LVI.

| The States are ranked from highest to lowest according to median— | Montana. | Illinois. | Colorado. | Minnesota. | Michigan. | Wisconsin. | Indiana. | Oklahoma. |
|---|---|---|---|---|---|---|---|---|
| Salary of teachers | 1 | 3 | 4 | 6 | 8 | 11 | 7 | 12 |
| Salary of principal | 1 | 2 | 4 | 13 | 7 | 3 | 5 | 6 |
| Salary of superintendent | 2 | 3 | 4 | 5 | 7 | 6 | 8 | 1 |
| Value of material equipment | 1 | 2 | 3 | 7 | 6 | 8 | 10 | 9 |
| Number of recitation rooms, laboratory rooms, etc. | 1 | 2 | 9 | 3 | 5½ | 5½ | 5½ | 9 |
| Number of volumes in high-school library | 4 | 6 | 5 | 2 | 3 | 8 | 10 | 14 |
| Total | 10 | 18 | 29 | 36 | 36½ | 41½ | 45½ | 51 |

| The States are ranked from highest to lowest according to median— | Ohio. | Missouri. | South Dakota. | North Dakota. | Kansas. | Iowa. | Nebraska. |
|---|---|---|---|---|---|---|---|
| Salary of teachers | 5 | 2 | 9 | 10 | 13 | 14 | 15 |
| Salary of principal | 8 | 11 | 10 | 12 | 9 | 14 | 15 |
| Salary of superintendent | 11 | 15 | 10 | 9 | 12 | 14 | 13 |
| Value of material equipment | 4 | 5 | 11 | 12 | 14 | 13 | 15 |
| Number of recitation rooms, laboratory rooms, etc | 11½ | 11½ | 13 | 15 | 9 | 5½ | 14 |
| Number of volumes in high-school library | 13 | 9 | 1 | 7 | 11 | 12 | 15 |
| Total | 52½ | 53½ | 54 | 65 | 68 | 72½ | 87 |

By adding the figures representing the rankings of each State for the six items we get a final ranking in which Montana is first, Illinois second, Colorado third, etc. This final ranking, however, should not be taken too seriously, because the figures do not tell all of the truth. In the first place, the schools in one State may have much smaller enrollments than those in another. The former group of schools would consequently not require so much equipment per school as the latter to be equally well equipped. In the second place, the number of schools reporting from Montana, Colorado, Oklahoma, South Dakota, and North Dakota is comparatively small in each case. These States are therefore represented in the association by only a small proportion of their schools and they are the best. This is especially true concerning Montana, which is represented by only 16 schools. In the third place, the rank for the schools of a State may be disproportionately raised by the presence of a large city within its borders which has a large number of schools, all of which are of a high order. This is brought out in the case of Illinois and also of Missouri. In Illinois the Chicago schools make the school system of Illinois appear better than it really is. In the fourth place, the ranking is based upon medians, and medians are only partly satisfactory.

In conclusion it should be said that the requirements of the association are not being met by all the schools of the association. It might be argued that nothing else should be expected, that no system of standards could be drawn up which would be met by so large a body of schools representing so large a section of the country and such varied conditions. However, the association sets up certain standards and is supposed to admit only those schools which can and do meet these standards. If the association took schools into its membership indiscriminately and then attempted by some method of persuasion to get them to conform to certain ideals to which it holds, it would be quite a different matter. But that is not the method adopted. Furthermore, the standards are not of such a character as to prevent the individual public high school from carrying out its peculiar mission to its community. It would seem therefore that the standards of the association should either be met by the schools of the association or revised.

The final conclusion which is justified by these considerations is that the association ought at regular intervals to make an exhaustive study of the practices of schools. There would doubtless be great advantage in including in such studies all the secondary schools in the territory of the association. Standards could then be set up on the basis of the known facts with regard to school practices, and the methods of admission to the association could be determined on a strictly empirical basis.

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UNITED STATES BUREAU OF EDUCATION

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# ACCREDITED SECONDARY SCHOOLS IN THE UNITED STATES

BY

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DEPARTMENT OF THE INTERIOR

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# LETTER OF TRANSMITTAL.

**Department of the Interior,**
**Bureau of Education,**
*Washington, January 19, 1915.*

Sir: On the first of May, 1913, I recommended the publication of a pamphlet containing lists of accredited secondary schools in the United States as a bulletin of the Bureau of Education. In my letter of transmittal I called attention to the fact that many students apply for admission to higher institutions in other States and sections than those in which they have received their high-school preparation. Many also seek certificates from examining and licensing boards, which have no direct means of knowing the standards of the schools from which the applicants come. The demand for this information led the Bureau of Education to undertake the collection and preparation of lists of high schools and academies accredited by State universities, approved by State departments of education, or recognized by examining and certifying boards. The demand proved to be even greater than had been anticipated. The edition of the bulletin was soon exhausted, and there have since been many requests from college and university officers for copies of it, which could not be met. Moreover, changes are made in these lists of accredited schools from year to year. For these reasons, I have requested Dr. S. P. Capen, specialist in higher education in the bureau, to revise the pamphlet on a somewhat different basis. The revision is contained in the accompanying manuscript which I recommend for publication as a bulletin of the Bureau of Education.

Respectfully submitted.

P. P. Claxton,
*Commissioner.*

The Secretary of the Interior.

# ACCREDITED SECONDARY SCHOOLS IN THE UNITED STATES.

The lists of accredited secondary schools which are presented in this bulletin are designed to meet the needs of officers charged with the admission of new students to secondary schools, colleges, universities, professional schools (especially schools of law and medicine), normal schools, etc.; of State examining and certifying boards, which are concerned with the status of secondary schools located at a distance; and of parents who may want to know about the high schools of any particular State or section.

The first issue of the bulletin was published in 1913. The great annual increase in the number of secondary schools (in 1910–11 there were 12,213; in 1911–12 the number had grown to 13,268; in 1912–13 it had reached 13,445), together with the sudden changes in standing, generally for the better, of many secondary schools in all parts of the country, necessitate frequent revisions. A few new lists have been added, and certain minor changes have been made in the arrangement of the bulletin. These are mentioned below. For the rest, the essential part of the introduction to the previous issue is reprinted here.

### ACCREDITED SECONDARY SCHOOL DEFINED.

An "accredited secondary school," as the term is used in this bulletin, is a school which is equipped to prepare students for colleges requiring at least 14 units for unconditioned admission and which has been investigated or approved for this purpose by one of the following agencies: A State officer of education, a university or college inspector or committee on admissions, an officer or committee of an accrediting association. Except in the case of certain of the Southern States whose high-school courses are based upon seven years of elementary training, it is understood that these 14 units represent secondary work above the standard eight-grade elementary-school course. It is assumed that the curriculum of an accredited school represents four years of 36 or more weeks each; that at least three teachers give their whole time to high-school work;[1] and that the school keeps up an adequate library and laboratory equipment.

### UNIT DEFINED.

The following authoritative definition of the word "unit" has been made by the National Conference Committee on Standards of Colleges and Secondary Schools, which is composed of representatives of the National Association of State Universities, the New England College Entrance Certificate Board, the College Entrance Examination Board, the Association of Colleges and Preparatory Schools of the Middle States and Maryland, the North Central Association of Colleges and Secondary Schools, the Association of Colleges and Preparatory Schools of the Southern States, the New England Association of Colleges and Preparatory Schools, the Carnegie Foundation for the Advancement of Teaching, and the United States Commissioner of Education:

**A unit represents a year's study in any subject in a secondary school, constituting approximately a quarter of a full year's work.**

This statement is designed to afford a standard of measurement for the work done in secondary schools. It takes—

(1) The four-year high-school course as a basis and assumes that—
(2) The length of the school year is from 36 to 40 weeks; that—
(3) A period is from 40 to 60 minutes in length; and that—
(4) The study is pursued four or five periods a week;

but under ordinary circumstances a satisfactory year's work in any subject can not be accomplished in less than 120 sixty-minute hours, or their equivalent. Schools organized on any other than a four-year basis can nevertheless estimate their work in terms of this unit.

### VARIATIONS IN REQUIREMENTS OF ACCREDITING AGENCIES.

The number of subjects recognized by the various accrediting bodies as forming an acceptable part of the college preparatory course varies greatly; for example, the subjects recognized by the College Entrance Examination Board as permissible in a standard high-school course are:

| | Units. | | Units. |
|---|---|---|---|
| English up to | 3 | Spanish | 2 |
| Mathematics up to | 3½ | History | 4 |
| Latin | 4 | Science | 4 |
| Greek | 3 | Drawing | 1 |
| French | 3 | Music | 2 |
| German | 3 | | |

On the other hand, there are State universities and privately endowed institutions, like Leland Stanford University, which permit great enlargement of the range of electives. The University of Minnesota, for example, accepts the following:

---

[1] Exceptions are certain schools in the lists of Georgia, New Hampshire, and Vermont which have less than three teachers, but otherwise conform to the definition and are approved by the State officials.

| | Units. | | Units. |
|---|---|---|---|
| English | 3–4 | Business arithmetic | ½ |
| Mathematics | 2–3½ | Business law | ½ |
| Latin | 2–4 | Bookkeeping | 1–2 |
| Greek | 2 | Stenography and typewriting | 1–2 |
| French | 2–4 | Freehand drawing | 2 |
| German | 2–4 | Mechanical drawing | 2 |
| Spanish | 2–4 | Shopwork | 2 |
| Scandinavian | 2–4 | Modeling and wood carving | 1 |
| History and social science | ½–6 | Domestic art and science up to | 4 |
| Natural science | ½–6 | Agriculture | 1–4 |
| Vocational subjects | ½–4 | Normal training subjects | 1–3 |

It will therefore be apparent that the only close correspondence among the requirements of the various institutions mentioned in this pamphlet is the quantitative one. All specify at least 14 units, except the University of South Carolina, which admits with 10. None requires more than 16 units for admission.

The requirements of each accrediting agency are briefly stated at the head of the list of schools which each accredits. At the head of each list of schools accredited by a State university or private institution the requirements for admission to the A. B. course are summarized. The schools on the accredited list generally have the privilege of certificating students to other courses as well. To outline the admission requirements for all these courses would consume much space and might lead to confusion. The requirements for admission to the A. B. course may in each case be considered fairly typical of the institution's policy with respect to entrance requirements.

## METHODS OF ACCREDITING.

Two general methods are in use for carrying on the system of accrediting in those States where the State authority embraces agencies for higher education. Under the first the inspection of the work of the high schools is done through an officer or committee of the State university, and the list of acceptable or accredited high schools is published in the catalogue of the university and thus made available for other institutions within the same State or for institutions in neighboring States. Under the second, the inspection and rating are done by the State superintendent of public instruction, the State board of education, or the State education office, acting through specially appointed officers. Examples of the former method are the Universities of Michigan, California, and Texas; of the latter method, the States of New York, Ohio, and Minnesota.

The requirement of the completion of a standard four-year high-school course representing at least 14 units for admission to college, or as a part of the prescription for admission to professional schools or to the practice of professions, has produced a group of organizations among whose activities are the coordination of standards of secondary education in neighboring States and the compilation of lists of accredited secondary schools. Such sectional organizations are now at work in the North Central States, the Middle States and Maryland, New England, and the Southern States. These organizations are purely voluntary and have no legal control over the institutions which they rate. The influence which they wield, however, because of the fact that they focus representative educational opinion in their respective sections, is considerable. Occasionally also private institutions, like the University of Chicago, have carried on their own investigation and accrediting.

## CONTENTS OF THE BULLETIN.

### PART I: STATE LISTS.

The bulletin is divided into three parts. The first part, as is appropriate, contains lists of schools accredited by State universities and State officers of education. Sometimes both the State university and the State department of education publish accredited lists. In such cases the list of the State university is printed first, and all schools accredited by the State education department not included in the university list are then added by way of supplement. When the State department of education or the State university prints lists of high schools of different grades, only schools of the first grade are included, except in the case of Georgia and Maryland.[1]

Lists from every State except South Dakota are included in Part I. In this State neither the State university nor the State department of education has attempted during the last year and a half to survey the secondary schools with a view to accrediting them for college preparatory work. It therefore seemed better to omit South Dakota from Part I than to publish a list of accepted schools in that State which was admittedly antiquated. South Dakota is in the territory covered by the North Central Association of Colleges and Secondary Schools. The list of this association, Part II, page 92, contains a number of South Dakota schools.

### PART II: LISTS OF ACCREDITING ASSOCIATIONS.

Part II contains the lists of the three principal associations which undertake to accredit schools. The methods or standards of these associations are not identical. The list accredited by each is preceded by a statement of the basis upon which it is compiled.

---

[1] Schools accredited by the University of Georgia in Group II are included in the list published for that institution. These schools meet the requirements just outlined, except that they are admitted to the certificating privilege with only 2.5 teachers of academic subjects.

The second group schools of Maryland have been certified to by the superintendent of public instruction as fulfilling the definition of an accredited school printed above.

### PART III: LISTS OF CERTAIN PRIVATE INSTITUTIONS.

With regard to Part III, a special explanation is in order. After the publication of the first issue of this bulletin it was found that many excellent private schools, especially in the Eastern States, which were thoroughly equipped to prepare for college, and indeed had annually for many years been sending an entirely satisfactory delegation to the best colleges in the country, were omitted from the lists of accredited schools of the States in which they were located. This was due either to the fact that the States had no State universities admitting by certificate or to the failure of the State education departments to include private schools in their lists of approved secondary institutions. The absence of the names of many of these schools from a document as comprehensive in its scope as this publication gave rise to false impressions concerning their standing. It seemed desirable to extend the scope of the bulletin so as to secure their inclusion. Accordingly the Bureau of Education asked a number of colleges and universities admitting on certificate and drawing students from the States in which private schools had previously not received official recognition to submit their own lists of accredited schools. Three considerations determined the choice of the higher institutions of whom this request was made: First, the policy of admission on certificate; second, the area from which each institution was known to draw its students; and, third, the recognized high standing of each. The lists submitted by the Catholic University of America, University of Chicago, George Washington University, Johns Hopkins University, St. John's College, Mount Holyoke College, Wellesley College, and Tulane University are printed in full in Part III. At the end of Part III are printed also the names of those schools belonging to the Association of Colleges and Preparatory Schools of the Middle States and Maryland which, on account of their location, are not on any of the other lists included in the bulletin, but which have the privilege of certificating graduates to various colleges of high standing.

The schools are listed alphabetically, according to the towns in which they are located. The names of accredited private secondary schools and academies are printed in italics.

# PART I.—STATE LISTS.

---

## ALABAMA.

Schools fully affiliated with the University of Alabama, April, 1914.

| | Units. |
|---|---|
| Admission requirements | 14 |
| Prescribed units: | |
| English | 3 |
| Mathematics | 3 |
| Latin | 3 |
| Electives | 4 |

Abbeville—Third District Agricultural School.
Albertville—Seventh District Agricultural School.
Alexander City—High School.
Andalusia—High School.
Anniston—
    High School.
    *Noble Institute.*
Ashland—Clay County High School.
Athens—
    *Greene University School.*
    Eighth District Agricultural School.
Atmore—Escambia County High School.
Attalla—Etowah County High School.
Bessemer—High School.
Birmingham—
    *College Training School.*
    Central High School.
    *Howard Academy.*
    *Margaret Allen School.*
    *University High School.*
Blountsville—Ninth District Agricultural School.
Brewton—Collegiate Institute.
Brundidge—Pike County High School.
Butler—Choctaw County High School.
Camden—Wilcox County High School.
Camp Hill—High School.
Center—Cherokee County High School.
Centerville—Bibb County High School.
Clio—Barbour County High School.
Columbia—Houston County High School.
Columbiana—Shelby County High School.
Cullman—Cullman County High School.
Dadeville—Tallapoosa County High School.
Daphne—Normal School.
Decatur—High School.
Demopolis—High School.
Dothan—High School.
Double Springs—Winston County High School.
Eclectic—Elmore County High School.
Elba—High School.
Elkmont—Limestone County High School.
Ensley—High School.
Enterprise—Coffee County High School.
Eufaula—High School.
Eutaw—High School.
Evergreen—Second District Agricultural School.
Florala—High School.
Fort Deposit—Lowndes County High School.
Fort Payne—Dekalb County High School.
Gadsden—High School.
Georgiana—High School.
Greenville—High School.
Grove Hill—Clarke County High School.
Guin—Marion County High School.
Guntersville—Marshall County High School.
Gurley—Madison County High School.
Haleyville—High School.
Hamilton—Sixth District Agricultural School.
Hartford—Geneva County High School.
Hartsells—Morgan County High School.
Headland—Henry County High School.
Heflin—Cleburne County High School.
Huntsville—
    High School.
    *Goodrich School.*
Jackson—First District Agricultural School.
Jasper—Walker County High School.
La Fayette—High School.
Leighton—Colbert County High School.
Lincoln—Talladega County High School.
Lineville—N. E. Alabama Agricultural Institute.
Marion—*Judson Academy.*
Milltown—Chambers County High School.
Mobile—
    *Baker High School.*
    High School.
    *Knott High School.*
    *Military Institute.*
    *University Military School.*
Monroeville—Monroe County High School.
Montgomery—
    *Barnes School.*
    *Edgar School.*
    Sidney Lanier High School.
    *University School.*
Moulton—Lawrence County High School.
Moundville—Normal School.
New Decatur—High School.
New Market—High School.
Newton—*Baptist Collegiate Institute.*
Notasulga—Macon County High School.
Odenville—St. Clair County High School.
Oneonta—Blount County High School.
Opelika—Lee County High School.
Oxford—Calhoun County High School
Ozark—Dale County High School.
Piedmont—High School.
Pineapple—Moore Academy.
Plantersville—Dallas County High School.
Prattville—Autauga County High School.
Reform—Pickens County High School.
Roanoke—Handley High School.
Rockford—Coosa County High School.
Rogersville—Lauderdale County High School.
Russellville—Franklin County High School.
Scottsboro—Jackson County High School.

Selma—Dallas Academy.
Sheffield—High School.
Sylacauga—Fourth District Agricultural School.
Talladega—High School.
Thomaston—Marengo County High School.
Thomasville—High School.
Thorsby—*Institute.*
Tuscaloosa—
  High School.
  *University Training School.*
Tuscumbia—
  *Deshler Institute.*
  High School.
Tuskegee—High School.
Union Springs—High School.
Uniontown—High School.
Vernon—Lamar County High School.
Wedowee—Randolph County High School.
Wetumpka—Fifth District Agricultural School.
York—Sumter County High School.

## ARIZONA.

Accredited by the University of Arizona, May, 1914.

| | Units. |
|---|---|
| Admission requirements | 15 |
| Prescribed units: | |
| English | 3 |
| Mathematics | 2½ |
| History and civics | 1 |
| Science | 1 |
| Foreign languages | 2 |
| Electives | 5½ |

Bisbee—High School.
Clifton—High School.
Douglas—High School.
Flagstaff—Northern Arizona Normal School (academic department).
Glendale—High School.
Globe—High School.
Jerome—High School.
Mesa—High School.
Phoenix—High School.
Prescott—High School.
Tempe—
  High School.
  Tempe Normal School of Arizona (academic department).
Thatcher—*Gila Academy.*
Tucson—High School.
Willcox—High School.
Winslow—High School.
Yuma—High School.

## ARKANSAS.

Class A schools approved by the Arkansas State Department of Education and accredited by the University of Arkansas, May, 1914.

| | Units. |
|---|---|
| University admission requirements | 14 |
| Prescribed units: | |
| English | 3 |
| Mathematics | 2 |
| History | 1 |
| Electives | 8 |

Amity—High School.
Argenta—High School.
Arkadelphia—High School.
Ashdown—High School.
Augusta—High School.
Bentonville—High School.
Berryville—High School.
Blytheville—High School.
Booneville—High School.
Brinkley—High School.
Cabot—High School.
Camden—High School.
Carlisle—High School.
Charleston—High School.
Clarendon—High School.
Clarksville—
  *Arkansas Cumberland College.*
  High School.
Conway—Arkansas State Normal School.
Corning—High School.
Cotter—High School.
Crossett—High School.
Dardanelle—High School.
De Queen—High School.
Dumas—High School.
El Dorado—High School.
England—High School.
Eureka Springs—
  *Crescent College Academy.*
  High School.
Fayetteville—
  High School.
  University Training High School.
Fordyce—High School.
Forrest City—High School.
Fort Smith—High School.
Gentry—High School.
Green Forest—High School.
Hamburg—High School.
Harrison—High School.
Hazen—High School.
Helena—High School.
Hope—High School.
Hot Springs—High School.
Huntington—High School.
Imboden—*Sloan Hendrix Academy.*
Jacksonville—High School.
Jonesboro—High School.

Junction City—High School.
Lake Village—High School.
Little Rock—
    High School.
    *Little Rock College.*
Lonoke—High School.
Magnolia—High School.
Malvern—High School.
Mena—High School.
Monticello—High School.
Morrilton—High School.
Mountain Home—*Mountain Home Academy.*
Nashville—High School.
Paragould—High School.
Piggott—High School.
Pine Bluff—High School.
Pocahontas—High School.
Portland—High School.
Prescott—High School.
Rector—High School.
Rogers—
    High School.
    *Rogers Academy.*
Russellville—High School.
Siloam Springs—High School.
Springdale—High School.
Stamps—High School.
Stephens—High School.
Stuttgart—
    High School.
    *Training School.*
Texarkana—High School.
Van Buren—High School.
Waldron—High School.
Warren—High School.
Wynne—High School.

## CALIFORNIA.

Schools accredited by the University of California for the year 1913-14.

| | Units. |
|---|---|
| Admission requirements | 15 |
| Prescribed units: | |
| English | 2 |
| Mathematics | 2 |
| History and civics | 1 |
| Science | 1 |
| Foreign languages | 2 |
| Additional foreign language, science, or mathematics (or combinations of these subjects) | 2 |
| Electives | 5 |

Alameda—High School.
Alhambra—City High School.
Alturas—Modoc County High School.
Anaheim—Union High School.
Anderson—Union High School.
Angels Camp—Bret Harte Union High School.
Antioch—Riverview Union High School.
Arcata—Union High School.
Arroyo Grande—Union High School.
Auburn—Placer County High School.
Azusa—Citrus Union High School.
Bakersfield—Kern County High School.
Banning—Union High School.
Belmont—*Belmont School.*
Benicia—High School.
Berkeley—
    High School.
    *A-to-Zed School.*
    *Boone's University School.*
    *Miss Head's School.*
    *Preparatory School.*
    *The Randolph School.*
Bishop—Union High School.
Bostonia—El Cajon Valley Union High School.
Boulder Creek—Union High School.
Brawley—Union High School.
Brentwood—Liberty Union High School.
Burlingame—*St. Matthew's School.*
Burbank—Union High School.
Campbell—Union High School.
Cedarville—Surprise Valley Union High School.
Centerville—Union High School.
Ceres—High School.
Chico—High school.
Chino—High School.
Claremont—High School.
Clovis—Union High School.
Coalinga—Union High School.
College City—Pierce Joint Union High School.
Colton—High School.
Colusa—High School.
Compton—Union High School.
Concord—Mount Diablo Union High School.
Corning—Union High School.
Corona—High School.
Covina—Union High School.
Crescent City—Del Norte County High School.
Crockett—John Swett Union High School.
Dinuba—Union High School.
Dixon—Union High School.
Dos Palos—Joint Union High School.
Downey—Los Nietos Union High School.
El Centro—Central Union High School.
Elk Grove—Union High School.
El Monte—Union High School.
Escondido—High School.
Esparto—Union High School.
Etna Mills—Etna Union High School.
Eureka—City High School.
Exeter—Union High School.
Fairfield—Armijo Union High School.
Fallbrook—Union High School.
Ferndale—Union High School.
Fillmore—Union High School.
Fort Bragg—Union High School.
Fortuna—High School.
Fowler—Union High School.
Fresno—High School.
Fullerton—Union High School.
Gilroy—High School.
Glendale—Union High School.
Gonzales—Union High School.

Grass Valley—High School.
Gridley—Union High School.
Hanford—Union High School.
Hayward—Union High School.
Healdsburg—High School.
Hemet—Union High School.
Hollister—San Benito County High School.
Hollywood—*Immaculate Heart College.*
Holtville—Union High School.
Huntington Beach—Union High School.
Huntington Park—Union High School.
Imperial—Imperial Valley Union High School.
Inglewood—Union High School.
Ione—Union High School.
Irvington—*Anderson Academy.*
Kingsburg—Joint Union High School.
Lakeport—Clear Lake Union High School.
Lemoore—Union High School.
Lincoln—Union High School.
Lindsay—High School.
Livermore—Union High School.
Lodi—Union High School.
Lompoc—Union High School.
Long Beach—Polytechnic High School.
Lordsburg—
    Bonita Union High School.
    *Lordsburg College, Academic Department.*
Los Angeles—
    High School.
    Gardena Agricultural High School.
    *Girls' Collegiate School.*
    Hollywood High School.
    *Harvard School.*
    Manual Arts High School.
    *Marlborough School.*
    Polytechnic High School.
    San Pedro High School.
    *Westlake School for Girls.*
Los Banos—West Side Union High School.
Los Gatos—High School.
Madeira—Union High School.
Martinez—Alhambra Union High School.
Marysville—High School.
Mendocino—Mendocino County High School.
Merced—County High School.
Mill Valley—Tamalpais Union High School.
Modesto—High School.
Monrovia—City High School.
Montebello—High School.
Monterey—County High School.
Morgan Hill—Live Oak Union High School.
Mountain View—High School.
Napa—High School.
National City—High School.
Nevada City—High School.
Newman—Orestimba Union High School.
Nordhoff—Union High School.
Norwalk—Excelsior Union High School.
Oakdale—Union High School.
Oakland—
    High School.
    *College of the Holy Names High School.*
    *Horton School.*
    John C. Fremont High School.
    Manual Training and Commercial High School.
Oleander—Washington Union High School.
Ontario—Chaffey Union High School.
Orange—Union High School.
Orland—Joint Union High School.
Orosi—Union High School.
Oroville—Union High School.
Oxnard—Union High School.
Pacific Grove—High School.
Palo Alto—
    High School.
    *Castilleja School.*
    *Manzanita Hall.*
    *Miss Harker's School.*
Pasadena—High School.
Paso Robles—High School.
Petaluma—High School.
Piedmont—*Miss Ransom and Miss Bridges' School.*
Placerville—El Dorado County High School.
Pomona—High School.
Porterville—Union High School.
Red Bluff—Union High School.
Redding—Shasta County High School.
Redlands—High School.
Redondo—Union High School.
Redwood City—Sequoia Union High School.
Reedley—Joint Union High School.
Richmond—Union High School.
Riverside—
    Girls' High School.
    Polytechnic High School.
Sacramento—High School.
St. Helena—Union High School.
Salinas—High School.
San Andreas—Calaveras County High School.
San Bernardino—High School.
San Diego—High School.
San Fernando—Union High School.
San Francisco—
    *Miss Burkes' School.*
    *California School of Mechanical Arts.*
    *Cogswell Polytechnical College.*
    Girls' High School.
    *Hamlin School.*
    Lowell High School.
    Mission High School.
    Polytechnic High School.
    *St. Rose Academy.*
    *Trinity School.*
    *University School.*
Sanger—Union High School.
San Jacinto—High School.
San Jose—
    *College Park Academy.*
    High School.
    *Washburn School.*
San Luis Obispo—High School.
San Mateo—Union High School.
San Rafael—
    High School.
    *Dominican College.*
    *Hitchcock Military Academy.*
    *Mount Tamalpais Military Academy.*
Santa Ana—High School.
Santa Barbara—High School.
Santa Clara—High School.
Santa Cruz—High School.
Santa Maria—Union High School.
Santa Monica—High School.
Santa Paula—Union High School.

Santa Rosa—
  High School.
  *Ursuline College.*
Santa Ynez—Valley Union High School.
Sebastopol—Analy Union High School.
Selma—Union High School.
Shorb—*Ramona Convent of the Holy Names.*
Sonoma—Valley Union High School.
Sonora—Tuolumne County High School.
South Pasadena—High School.
Stockton—High School.
Susanville—Lassen County High School.
Sutter—Union High School.
Tulare—High School.
Tuolumne—Summerville Union High School.
Turlock—Joint Union High School.
Ukiah—Mendocino County High School.
Vacaville—Union High School.
Vallejo—High School.
Ventura—Union High School.
Visalia—High School.
Watsonville—High School.
Whittier—Union High School.
Williams—Union High School.
Willits—Union High School.
Willows—Glenn County High School.
Winters—Joint Union High School.
Woodland—High School.
Yreka—Siskiyou County High School.

## COLORADO.

Accredited by the University of Colorado, March, 1914.

| | Units. |
|---|---|
| Admission requirements | 15 |
| Prescribed units: | |
| English | 3 |
| Mathematics | 2 |
| Foreign language | 4 |
| History | 2 |
| Science | 2 |
| Electives | 2 |

Alamosa—High School.
Arvada—High School.
Aspen—High School.
Berthoud—High School.
Boulder—State Preparatory School.
Breckenridge—High School.
Brighton—High School.
Brush—High School.
Canon City—
  High School.
  South Canon City High School.
Castle Rock—Douglas County High School.
Central City—High School.
Cheyenne Wells—Cheyenne County High School.
Colorado City—High School.
Colorado Springs—High School.
Cripple Creek—High School.
Delta—High School.
Denver—
  East Side High School.
  Manual Training High School.
  North Side High School.
  South Side High School.
  West Side High School.
  *Miss Walcott's School.*
  *Wolfe Hall.*
Durango—High School.
Eaton—High School.
Edgewater—Wheat Ridge High School.
Florence—High School.
Fort Collins—High School.
Fort Morgan—High School.
Fowler—High School.
Fruita—High School.
Georgetown—High School.
Glenwood Springs—Garfield County High School.
Golden—High School.
Grand Junction—High School.
Greeley—High School.
Gunnison—Gunnison County High School.
Holly—High School.
Holyoke—Phillips County High School.
Idaho Springs—High School.
Julesburg—Sedgwick County High School.
Lafayette—High School.
La Junta—Otero County High School.
Lamar—High School.
Las Animas—Bent County High School.
Leadville—High School.
Littleton—High School.
Longmont—High School.
Louisville—High School.
Loveland—High School.
Manitou—High School.
Meeker—Rio Blanco High School.
Monte Vista—High School.
Montrose—Montrose County High School.
Ouray—Ouray County High School.
Palisade—High School.
Paonia—High School.
Pueblo—
  High School (Dist. No. 1).
  High School (Dist. No. 20).
Rifle—High School.
Rocky Ford—High School.
Saguache—Saguache County High School.
Salida—High School.
Silverton—High School.
South Canon City—High School.
Sterling—Logan County High School.
Telluride—High School.
Trinidad—High School.
Victor—High School.
Walsenburg—Huerfano County High School.
Windsor—High School.
Wray—Yuma County High School.

## CONNECTICUT.

Schools approved by the Connecticut State Board of Education, January 1, 1915.

Requirements for approval: Satisfactory building equipment and health provisions; well-adjusted course of study; a teaching staff well qualified in respect of an education, and ability to teach; instruction on the high-school plane; adequate wages and upkeep; adaptation to community interests.

Ansonia—High School.
Branford—High School.
Bridgeport—High School.
Bristol—High School.
Central Village—Plainfield High School.
Chester—High School.
Clinton—*Morgan School.*
Colchester—High School.
Collinsville—High School.
Danbury—High School.
Danielson—Killingly High School.
Derby—High School.
Deep River—Saybrook High School.
East Hartford—High School.
Essex—High School.
Glastonbury—High School.
Greenwich—High School.
Guilford—High School.
Hartford—High School.
Meriden—High School.
Middletown—High School.
Naugatuck—High School.
New Britain—High School.
New Haven—High School.
New London—
    *Bulkeley School.*
    *Manual Training and Industrial School.*
    *Williams Memorial Institute.*
New Milford—High School.
Newtown—High School.
Norwalk—
    Junior High School.
    Senior High School.
Norwich—*Free Academy.*
Portland—High School.
Putnam—High School.
North Stonington—*Wheeler School.*
Seymour—High School.
Sharon—High School.
Shelton—High School.
Simsbury—High School.
Southington—Lewis High School.
South Manchester—High School.
Stafford Springs—Stafford High School.
Stamford—High School.
Stonington—High School.
Stratford—High School.
Suffield—High School.
Terryville—High School.
Thomaston—High School.
Thompson—High School.
Thompsonville—Enfield Public High School.
Torrington—High School.
Unionville—High School.
Vernon—Rockville High School.
Wallingford—High School.
Waterbury—High School.
Watertown—High School.
West Hartford—High School.
West Haven—High School.
Westport—High School.
Wethersfield—High School.
Willimantic—Windam High School.
Windsor—High School.
Windsor Locks—High School.
Winsted—*Gilbert School.*
Woodbury—High School.
Woodstock—High School.

## DELAWARE.

First-grade high schools reported by the Commissioner of Education of Delaware, October 16, 1914.

Dover—High School.
Milford—High School.
Seaford—High School.
Smyrna—High School.
Wilmington—High School.

Schools Accredited by Delaware College, May, 1914.

| | Units. |
|---|---|
| Admission requirements | 14½ |
| Prescribed units: | |
| English | 3 |
| Mathematics | 2½ |
| History | 1 |
| Modern language | 1 |
| Latin | 4 |
| Electives | 3 |

Dover—
    High School.
    *Wilmington Conference Academy.*
Georgetown—High School.
Lewes—High School.
Milford—High School.
Seaford—High School.
Smyrna—High School.
Wilmington—
    *Friends' School.*
    High School.

## DISTRICT OF COLUMBIA.

Secondary schools which have definite and formal accredited relations with outside universities equivalent to those of accredited schools in the States.

Washington—
  Armstrong Manual Training High School (colored).
  Central High School.
  Eastern High School.
  *Emerson Institute.*
  *Friends' Select School.*
Washington (continued)—
  *Madeira School for Girls.*
  M Street High School (colored).
  McKinley Manual Training High School.
  *National Cathedral School for Boys.*
  *National Cathedral School for Girls.*
  Western High School.

## FLORIDA.

Schools approved by the Florida State Board of Education and accredited by the University of Florida, December, 1914.

| | Units. |
|---|---|
| Admission requirements | 16 |
| Prescribed units: | |
| English | 3 |
| Mathematics | 3 |
| History | 1 |
| Science | 1 |
| Latin | 2 |
| Electives | 6 |

Arcadia—High School.
Bartow—High School.
Bradentown—High School.
Brooksville—High School.
Clearwater—High School.
Dade City—High School.
Daytona—High School.
DeFuniak Springs—
  High School.
  *Palmer College Academy.*
Eustis—High School.
Fort Lauderdale—High School.
Fort Meade—High School.
Fort Myers—High School.
Gainesville—High School.
Jacksonville—
  *Florida Military Academy.*
  High School.
Key West—High School.
Kissimmee—High School.
Lake City—High School.
Lakeland—High School.
Leesburg—High School.
Live Oak—High School.
Madison—High School.
Miami—High School.
Monticello—High School.
Mulberry—High School.
New Smyrna—High School.
Ocala—High School.
Orlando—High School.
Palatka—High School.
Pensacola—High School.
Plant City—High School.
Punta Gorda—High School.
Quincy—High School.
St. Augustine—High School.
St. Petersburg—High School.
Sanford—High School.
Seabreeze—High School.
Starke—High School.
Tallahassee—High School.
Tampa—High School.
Wauchula—High School.
West Palm Beach—High School.

## GEORGIA.

Group I.—Schools "fully accredited" by the University of Georgia, May, 1914.
Graduation on 15 accepted units.

| | Units. |
|---|---|
| Admission requirements | 14 |
| Prescribed units: | |
| English | 3 |
| Mathematics | 2½ |
| History | 2 |
| Foreign languages | 2 |
| Electives | 2½ |

Albany—High School.
Americus—High School.
Athens—High School.
Atlanta—
  Boys' High School.
  Girls' High School.
  *Marist College.*
  *Peacock Fleet School.*
Atlanta—Continued.
  Technological High School.
  *Washington Seminary.*
  *Woodberry School.*
Augusta—
  Richmond Academy.
  *Summerville Academy.*
  Tubman High School.

Bainbridge—High School.
Barnesville—Gordon Institute.
Boston—High School.
Bowman—*Gibson-Mercer Institute.*
Brunswick—Glynn Academy.
Cartersville—High School.
Cedartown—High School.
College Park—*Georgia Military Academy.*
Columbus—High School.
Cordele—High School.
Demorest—*Piedmont Academy.*
Dublin—High School.
Elberton—High School.
Fitzgerald—High School.
Gainesville—*Riverside Military Academy.*
Jackson—High School.
La Grange—
  High School.
  *La Grange College Academy.*
Locust Grove—*Institute.*
Macon—Gresham and Lanier High School.
Marietta—High School.
McRae—*South Georgia College.*
Milledgeville—Georgia Military College.
Mount Berry—*The Berry School for Boys.*
Newnan—High School.
Ocilla—High School.
Quitman—High School.
Rome—
  High School.
  *Darlington Academy.*
Savannah—
  *Benedictine College.*
  Chatham Academy.
  *Pape School.*
Thomaston—R. E. Lee Institute.
Toccoa—High School.
Valdosta—High School.
Warrenton—High School.
Washington—High School.
Waycross—High School.

Group II.—Schools "accredited" by the University of Georgia.
Graduation on 14 accepted units.

Ashburn—High School.
Augusta—*St. Joseph's Academy.*
Baxley—High School.
Blackshear—*Pierce Collegiate Institute.*
Blakely—High School.
Buena Vista—High School.
Carrollton—High School.
Cochran—High School.
Columbus—Secondary Industrial School.
Commerce—High School.
Dalton—High School.
Decatur—High School.
Eastman—High School.
Gainesville—High School.
Greensboro—High School.
Griffin—High School.
Hartwell—High School.
Hepzibah—High School.
Jonesboro—High School.
Lawrenceville—High School.
McDonough—High School.
Monroe—High School.
Montezuma—High School.
Mount Vernon—*Mount Vernon Institute.*
Moultrie—High School.
Norman Park—*Norman Park Institute.*
Pavo—High School.
Sandersville—High School.
Senoia—High School.
Sparks—*Sparks Collegiate Institute.*
Sparta—High School.
Stone Mountain—*University School for Boys.*
Tennille—High School.
Thomson—High School.
Thomasville—High School.
Vidalia—High School.
Vienna—High School.
West Point—High School.
Wrens—High School.
Winder—High School.
Wrightsville—*Warthen College.*

## IDAHO.

Accredited by the University of Idaho, April, 1914.

| | Units. |
|---|---|
| Admission requirements | 15 |
| Prescribed units: | |
| English | 4 |
| Mathematics | 2 |
| Foreign language [1] | 3 |
| Social science, including history | 1 |
| Natural science | 1 |
| Electives | 14 |

Albion—State Normal School.
American Falls—High School.
Blackfoot—High School.
Boise—
  High School.
  *St. Margaret's Academy.*
  *St. Teresa's Academy.*
Bonners Ferry—High School.
Buhl—High School.
Burke—High School.
Caldwell—
  *College of Idaho, Preparatory Department.*
  High School.
Coeur d' Alene—
  *Coeur d' Alene College.*
  High School.
Culdesac—High School.
Emmett—High School.
Fruitland—High School.
Genesee—High School.

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[1] Three units of Latin required for entrance to A. B. course.

- Gooding—High School.
- Grangeville—High School.
- Hailey—High School.
- Idaho Falls—High School.
- Jerome—High School.
- Lapwai—High School.
- Lewiston—
  - High School.
  - State Normal School.
- Malad—High School.
- Meridian—High School.
- Midvale—High School.
- Montpelier—High School.
- Moscow—
  - High School.
  - *Ursuline Academy.*
- Mountain Home—High School.
- Mullan—High School.
- Nampa—High School.
- New Plymouth—High School.
- Nez Perce—High School.
- Orofino—High School.
- Paris—*Fielding Academy.*
- Payette—High School.
- Parma—High School.
- Plummer—High School.
- Pocatello—
  - Academy of Idaho.
  - High School.
- Post Falls—High School.
- Potlatch—High School.
- Preston—*Oneida Stake Academy.*
- Rathdrum—High School.
- Rexburg—*Ricks Academy.*
- Rigby—High School.
- Rupert—High School.
- St. Anthony—High School.
- St. Maries—High School.
- Salmon—High School.
- Sandpoint—High School.
- Shoshone—High School.
- Spirit Lake—High School.
- Star—High School.
- Twin Falls—High School.
- Wallace—High School.
- Weiser—
  - High School.
  - *Idaho Industrial Institute.*
- Winchester—High School.

## ILLINOIS.

Accredited by the University of Illinois, January, 1914.

"The following high schools, having all the prescribed units and enough others to make up the required total of 15 units, are in the list of fully accredited schools.

"Not all these schools, however, are accredited for the same amount of work, nor all for the same subjects. A student presenting a certificate from any one of these schools will be given entrance credit for all the subjects named therein for which the said school is specifically accredited, as shown in the certificate of its accredited relation issued by the university."

| | Units. |
|---|---|
| Admission requirements | 15 |
| Prescribed units— | |
| English | 3 |
| Mathematics | 2½ |
| For courses in literature and arts in the college of liberal arts and sciences— | |
| History | 1 |
| Foreign language | 3 |
| Electives | 5½ |

- Abingdon—High School.
- Albion—
  - High School.
  - *Southern Collegiate Institute.*
- Aledo—
  - *Drury Academy.*
  - High School.
- Altamont—High School.
- Alton—High School.
- Amboy—High School.
- Anna—
  - High School.
  - *Union Academy.*
- Arcola—High School.
- Arlington Heights—High School.
- Armington—High School (Township).
- Arthur—High School.
- Ashland—High School.
- Assumption—High School (Township).
- Astoria—High School.
- Atlanta—High School.
- Atwood—High School.
- Auburn—High School.
- Augusta—High School.
- Aurora—
  - East High School.
  - West High School.
  - *Jennings Seminary.*
- Barry—High School.
- Batavia—High School.
- Beardstown—High School.
- Belleville—High School.
- Bellflower—High School (Township).
- Belvidere—High School.
- Bement—High School.
- Benton—High School (Township).
- Biggsville—High School (Township).
- Bloomington—High School.
  - *St. Mary's High School.*
- Blue Island—High School.
- Bridgeport—High School (Township).
- Bushnell—High School.
- Cairo—High School.
- Cambridge—High School.
- Camp Point—High School.
- Canton—High School.
- Carlinville—High School.
- Carlyle—High School.

Carmi—High School.
Carrollton—High School.
Carterville—High School.
Carthage—
    *Carthage College Academy.*
    High School.
Casey—High School.
Catlin High School.
Centralia—High School (Township).
Champaign—High School.
Charleston—High School.
Chatsworth—High School.
Chenoa—High School.
Chester—High School.
Chicago—
    Austin High School.
    Bowen High School.
    Calumet High School.
    Carl Schurz High School.
    *Chicago Latin School.*
    R. T. Crane Technical High School.
    Curtis High School.
    Englewood High School.
    *Francis W. Parker School.*
    Harrison Technical High School.
    *Harvard School.*
    Hyde Park High School.
    *Kenwood Institute.*
    Lake High School.
    Lake View High School.
    Lane Technical High School.
    *Loyola Academy.*
    McKinley High School.
    Marshall High School.
    Medill High School.
    *North Park College Academy.*
    Tuley High School.
    R. A. Waller High School.
    Wendell Phillips High School.
    *University High School.*
Chicago Heights—High School (Township).
Chillicothe—High School (Township).
Chrisman—High School.
Cicero—High School (J. S. Morton Township).
Clayton—High School.
Clinton—High School.
Colfax—High School.
Collinsville—High School (Township).
Crystal Lake—High School.
Dallas City—High School.
Danville—High School.
Decatur—High School.
De Kalb—High School (Township).
Delavan—High School.
Des Plaines—High School (Maine Township).
Dixon—
    High School.
    North High School.
Downers Grove—High School.
Dundee—High School.
Duquoin—High School (Township).
Dwight—High School.
Earlville—High School.
East St. Louis—High School.
Edwardsville—High School.
Effingham—High School.
Eldorado—High School (Township).
Elgin—
    *Elgin Academy.*
    High School.
Elizabeth—High School.
Elmhurst—
    *Evangelical Proseminar.*
    High School.
Elmwood—High School.
El Paso—High School.
Evanston—
    *Evanston Academy.*
    High School (Township.)
Fairbury—High School.
Fairfield—High School.
Farmer City—High School (Township).
Farmington—High School.
Flora—High School (Township).
Forrest—High School.
Freeport—High School.
Fulton—High School.
Galena—High School.
Galesburg—High School.
Galva—High School.
Geneseo—
    *Geneseo Collegiate Institute.*
    High School (Township).
Geneva—High School.
Genoa—High School.
Georgetown—High School (Township).
Gibson City—High School (Township).
Gilman—High School.
Godfrey—*Monticello Seminary.*
Granite City—High School.
Greenfield—High School.
Greenview—High School.
Greenville—High School.
Griggsville—High School.
Hamilton—High School.
Harrisburg—High School (Township).
Harvard—High School.
Harvey—High School (Township).
Havana—High School.
Henry—High School.
Herrin—High School (Township).
Heyworth—High School.
Highland—High School.
Highland Park—
    High School (Township).
    *Northwestern Military Academy.*
Hillsboro—High School.
Hindsboro—Union High School.
Hinsdale—High School.
Homer—High School.
Hoopeston—High School.
Hume—High School.
Hutsonville—High School (Township).
Illiopolis—High School.
Industry—High School (Township).
Jacksonville—
    *Academy of the Illinois Woman's College*
    High School.
    *Whipple Academy.*
Jerseyville—High School.
Johnson City—High School.
Joliet—High School (Township).
Kankakee—High School.
Kansas—High School.

Kenilworth—High School (Township).
Kewanee—High School.
Kinmundy—High School.
Knoxville—High School.
La Grange—High School (Township).
La Harpe—High School.
Lake Forest—
    *Ferry Hall.*
    *Lake Forest Academy.*
Lanark—High School.
La Salle—High School (Township).
Lawrenceville—High School (Township).
Lena—High School.
LeRoy—High School.
Lewistown—High School.
Lexington—High School.
Libertyville—High School.
Lincoln—High School.
Litchfield—High School.
Lockport—High School (Township).
Loda—High School.
Lovington—High School (Township).
McLeansboro—High School.
McNabb—John Swaney High School.
Macomb—
    High School.
    Western Illinois State Normal Academy.
Madison—High School.
Mansfield—High School.
Manteno—High School.
Marengo—High School.
Marion—High School (Township).
Marissa—High School (Township).
Marseilles—High School.
Marshall—High School (Township).
Mason City—High School.
Mattoon—High School.
Maywood—High School (Township).
Mazon—High School (Township).
Mendon—High School.
Mendota—High School.
Metropolis—High School.
Milford—High School (Township).
Minonk—High School.
Moline—High School.
Momence—High School.
Monmouth—High School.
Monticello—High School.
Morgan Park—
    High School (Township).
    *Morgan Park Academy.*
Morris—High School.
Morrison—High School.
Morton—High School (Township).
Mount Carmel—High School.
Mount Carroll—
    *Frances Shimer School.*
    High School.
Mount Pulaski—High School.
Mount Sterling—High School.
Mount Vernon—High School (Township).
Moweaqua—High School.
Murphysboro—High School (Township).
Naperville—
    High School.
    *Northwestern College Academy.*
Nashville—High School.
Neoga—High School (Township).
Newman—High School (Township).
Newton—High School.
Nokomis—High School.
Normal—
    High School.
    *Normal University High School.*
Oakland—High School.
Oak Park—High School (Township).
Oblong—High School.
Odell—High School.
Olney—High School.
Onarga—
    *Grand Prairie Seminary.*
    High School.
Oregon—High School.
Ottawa—High School (Township).
Palatine—High School.
Palestine—High School.
Pana—High School (Township).
Paris—High School.
Pawnee—High School (Township).
Paw Paw—High School.
Paxton—High School.
Pekin—High School.
Peoria—
    Averyville High School.
    *Bradley Polytechnic Institute.*
    Central High School.
    Manual Training High School.
Petersburg—High School.
Pittsfield—High School.
Plainfield—High School.
Plano—High School.
Polo—High School.
Pontiac—High School (Township).
Princeton—High School (Township).
Prophetstown—High School.
Quincy—
    High School.
    *St. Mary's Academy.*
Rantoul—High School.
Ridgefarm—High School.
Riverside—High School.
Robinson—High School (Township).
Rochelle—High School.
Rock Falls—High School.
Rockford—High School.
Rock Island—
    *Augustana College Academy.*
    High School.
    *Villa de Chantal.*
Roodhouse—High School.
Roseville—High School (Township).
Rossville—High School.
Rushville—High School.
Rutland—High School.
St. Charles—High School.
St. Elmo—High School.
Sandwich—High School.
Savanna—High School (Township).
Saybrook—High School.
Sheffield—High School.
Shelbyville—High School.
Sheldon—High School.
Sidell—High School (Township).
Sparta—High School.

Springfield—
  High School.
  *Ursuline Academy.*
Stanford—High School.
Staunton—High School.
Sterling—High School (Township).
Stockland—High School (Township).
Stockton—High School.
Stonington—High School.
Streator—High School (Township).
Sullivan—High School.
Sycamore—High School.
Taylorville—High School (Township).
Tiskilwa—High School (Township).
Toulon—High School (Township).
Tuscola—High School.
Upper Alton—*Western Military Academy.*
Urbana—High School.
Vandalia—High School.
Vermilion Grove—*Vermilion Academy.*
Villa Grove—High School.
Virden—High School.
Virginia—High School.
Walnut—High School.
Warren—High School.
Washburn—High School.
Washington—High School.
Waterloo—High School.
Watseka—High School.
Waukegan—High School (Township).
Wenona—High School.
West Chicago—High School.
Westfield—*Westfield College Academy.*
Wheaton—
  High School.
  *Wheaton College Academy.*
White Hall—High School.
Wilmington—High School.
Winchester—High School.
Woodstock—High School.
Wyoming—High School.
Yorkville—High School.

## INDIANA.

"Commissioned" (approved) by the State department of public instruction for the year 1914-15, and accredited by Indiana University.

| | Units. |
|---|---|
| Admission requirements | 16 |
| Prescribed units: | |
| English | 3 |
| Mathematics | 2 |
| Foreign language | 2 |
| History | 1 |
| Science | 1 |
| Additional units selected from above subjects | 2 |
| Electives | 5 |

Acton—High School.
Advance—High School.
Akron—High School.
Albany—High School.
Albion—High School.
Alexandria—High School.
Ambia—High School.
Amboy—High School.
Amo—High School.
Anderson—High School.
Andrews—High School.
Angola—
  High School.
  *Tri-State College.*
Arcadia—
  High School.
  Walnut Grove High School.
Argos—High School.
Ashley—High School.
Atlanta—High School.
Attica—High School.
Auburn—High School.
Aurora—High School.
Avilla—High School.
Batesville—High School.
Battle Ground—High School.
Baugo Township—High School.
Bedford—High School.
Berne—High School.
Bicknell—High School.
Bloomfield—High School.
Bloomingdale—*Academy.*
Bloomington—High School.
Bluffton—High School.
Boonville—High School.
Boswell—High School.
Bourbon—High School.
Brazil—High School.
Bremen—High School.
Bringhurst—High School.
Bristol—High School.
Broad Ripple—High School.
Brook—High School.
Brookston—High School.
Brookville—High School.
Brownsburg—High School.[1]
Brownstown—High School.
Bruceville—High School.
Bryant—High School.[2]
Buck Creek—High School.[2]
Bunker Hill—High School.
Burlington—High School.
Burnetts Creek—High School.
Burney—High School.
Butler—High School.
Cambridge City—High School.
Camden—High School.
Campbellsburg—High School.[2]
Cannelton—High School.
Carlisle—High School.
Carmel—High School.[2]
Carthage—High School.
Castleton—High School.
Cayuga—High School.

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[1] Commission to expire June 30, 1915.

[2] Commission expired June 30, 1914.

Centerville—High School.
Chalmers—High School.
Charlestown—High School.[1]
Charlotteville—High School.[1]
Chesterton—High School.
Chippewa—High School.
Churubusco—High School.
Cicero—High School.
Clarksburg—High School.
Clarks Hill—High School.[1]
Clay City—High School.
Clayton—High School.
Clinton—High School.
Cloverdale—High School.
Coalmont—High School.[1]
Coesse—High School.
Colfax—High School.[1]
Collegeville—*St. Joseph's College.*
Columbia City—High School.
Columbus—High School.
Connersville—High School.
Converse—High School.
Corydon—High School.
Covington—High School.
Cowan—High School.[1]
Crawfordsville—High School.
Crown Point—High School.
Culver—High School.
Cumberland—High School.
Cutler—High School.[1]
Cynthiana—High School.
Dale—High School.
Dana—
  Helt Township High School.
  High School.
Danville—
  *Central Normal College, Academic Department.*
  High School.
Darlington—High School.
Dayton—High School.
Decatur—High School.
Decker—High School.
Delphi—High School.
Dublin—High School.
Dunkirk—High School.
Earl Park—High School.[1]
East Chicago—High School.
Eaton—High School.
Edinburg—
  High School.
  Mount Auburn High School.
Edwardsport—High School.
Elkhart—High School.
Elnora—High School.
Elwood—High School.
English—High School.[1]
Epsom—High School.
Evansville—
  High School.
  High School (colored).
Fairland—High School.[1]
Fairmount—
  *Academy.*
  High School.
  *Theological Institute.*
Farmersburg—High School.
Farmland—High School.
Ferdinand—*Academy of the Immaculate Conception.*
Flora—High School.[2]
Forest—High School.[2]
Fort Branch—High School.
Fortville—High School.
Fort Wayne—
  *Central Catholic High School.*
  High School.
  *Sacred Heart Academy.*
  *St. Augustine Academy.*
  *St. Catherine's Academy.*
Fountain City—High School.
Fowler—
  High School.
  *Sacred Heart Academy.*
Francesville—High School.
Francisco—High School.[2]
Frankfort—High School.
Franklin—High School.
Frankton—High School.
Freelandville—High School.
Fremont—High School.[1]
French Lick—High School.
Fritchton—High School.
Galveston—High School.
Garrett—High School.
Gary—High School.
Gas City—High School.
Gaston—High School.
Geneva—High School.
Gilead—High School.
Glenn—High School.[1]
Goldsmith—High School.
Goodland—High School.
Goshen—
  *Academy.*
  High School.
Gosport—High School.
Grandview—High School.
Grass Creek—High School.
Greencastle—
  *DePauw Academy.*
  High School.
Greenfield—High School.
Greensburg—High School.
Greensfork—High School.
Greentown—High School.
Greenwood—High School.
Hagerstown—High School.
Hamilton—High School.[1]
Hamlet—High School
Hammond—
  *All Saints Academy.*
  High School.
Hanna—High School.
Hanover—*Academy.*
Harlan—High School.
Hartford City—High School.
Hebron—High School.
Hillsboro—High School.
Hobart—High School.
Hope—High School.
Hopewell—High School.
Howe—Lima High School.
Hudson—High School.[1]

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[1] Commission expired June 30, 1914.

[2] Commission to expire June 30, 1915.

- Huntingburg—High School.
- Huntington—
  - *Central College Academy.*
  - High School.
- Hymera—High School.
- Idaville—High School.
- Indianapolis—
  - Blind Institute.
  - Manual Training High School.
  - *St. Agnes Academy.*
  - *St. John's Academy.*
  - Shortridge High School.
  - *Tudor Hall.*
- Inwood—High School.
- Ireland—High School.
- Jackson—High School.
- Jamestown—High School.
- Jasonville—High School.
- Jasper—
  - *College.*
  - High School.
- Jeffersonville—High School.
- Jonesboro—High School.
- Kempton—High School.[1]
- Kendallville—High School.
- Kentland—High School.
- Kewanna—High School.
- Kingman—High School.
- Kirklin—High School.
- Knightstown—High School.
- Knox—High School.
- Kokomo—High School.[2]
- Kouts—High School.
- La Crosse—High School.
- Ladoga—High School.
- Lafayette—
  - High School.
  - Wea High School.
- Lafontaine—High School.[1]
- Lagrange—High School.
- Lagro—High School.
- Laketon—High School.
- Lakeville—High School.[1]
- La Otto—High School.
- Lapel—High School.
- Laporte—High School.
- Lawrenceburg—High School.
- Leavenworth—High School.[1]
- Lebanon—High School.
- Leo—High School.
- Letts—High School.
- Liberty—High School.
- Ligonier—High School.
- Lincoln—High School.[1]
- Linden—High School.
- Linton—High School.
- Logansport—
  - High School.
  - Metea High School.
- Loogootee—High School.
- Lowell—High School.[1]
- Lucerne—High School.
- Lynn—High School.
- Lyons—High School.
- McCordsville—High School.
- Madison—
  - Colored High School.
  - High School.
- Marengo—High School.
- Marion—
  - High School.
  - *Normal Institute.*
- Markle—High School.
- Martinsville—High School.
- Matthews—High School.
- Mecca—High School.
- Medaryville—High School.[1]
- Medora—High School.[1]
- Mellot—High School.
- Mentone—High School.
- Merom—*Union Christian Academy.*
- Michigan City—High School.
- Middlebury—High School.
- Middletown—High School.
- Milan—High School.
- Milford—High School.
- Milroy—High School.
- Milton—High School.
- Mishawaka—High School.
- Mitchell—High School.
- Monon—High School.
- Monroe—High School.
- Monroe City—High School.
- Monroeville—High School.
- Montezuma—High School.
- Monticello—High School.
- Montmorenci—High School.
- Montpelier—High School.
- Moore's Hill—*Academy.*
- Moreland—High School.
- Mooresville—High School.
- Morocco—High School.
- Morristown—High School.
- Mount Vernon—High School.
- Mulberry—
  - High School.
  - *Weidner Institute.*
- Muncie—
  - High School.
  - *Normal Institute.*
- Nappanee—High School.
- Nashville—High School.
- New Albany—
  - Colored High School.
  - High School.
- New Augusta—High School.
- Newburgh—High School.
- New Carlisle—High School.
- New Castle—High School.
- New Harmony—High School.
- New Haven—High School.
- New London—High School.
- New Market—High School.
- Newport—High School.
- New Richmond—High School.
- Newton—High School.
- Noblesville—High School.
- North Judson—High School.
- North Liberty—High School.

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[1] Commission expired June 30, 1914.

[2] Commission expires June 30, 1915.

North Manchester—
    Chester Township High School.
    High School.
    *Manchester Academy.*
North Salem—High School.
North Vernon—High School.
Oakland City—
    *Academy.*
    High School.
Oaklandon—High School.
Oaktown—High School.
Odon—High School
Oldenburg—*Academy of the Immaculate Conception.*
Onward—High School.
Orland—High School.
Orleans—High School.
Osgood—High School.[1]
Ossian—High School.
Otterbein—High School.
Otwell—High School.
Owensville—High School.
Oxford—High School.
Paoli—High School.
Parker—High School.
Pendleton—High School.
Pennville—High School.
Perrysville—High School.
Peru—High School.
Petersburg—High School.
Petroleum—High School.
Pimento—High School.
Pine Village—High School.
Plainfield—
    *Academy.*
    High School.
Plainville—High School.
Pleasant Lake—High School.
Plymouth—High School.
Portland—High School.
Poseyville—High School.
Princeton—High School.
Raub—High School.[1]
Redkey—High School.
Remington—High School.
Rensselaer—High School.
Richmond—High School.
Ridgeville—
    High School.
    Green Township High School.
Riley—High School.
Rising Sun—High School.
Roachdale—High School.
Roann—High School.
Roanoke—High School.
Rochester—High School.
Rockport—High School.
Rockville—High School.
Rolling Prairie—
    High School.
    *Interlaken School.*
Rome City—High School.
Romney—High School.
Rossville—High School.
Royal Center—High School.
Royerton—High School.
Rushville—High School.
Russellville—High School.
Russiaville—High School.
St. Mary's—*Academy.*
St. Paul—High School.
Salem—High School.
Sandborn—High School.
Scottsburg—High School.
Selma—High School.
Seymour—High School.
Sharpsville—High School.
Shelburn—High School.
Shelbyville—High School.
Sheridan—High School.
Shipshewana—High School.
Shoals—High School.
Silver Lake—High School.
Smithville—High School.
South Bend—
    High School.
    *St. Joseph's College.*
Southport—High School.
South Milford—High School.
South Whitley—High School.
Spartanburg—High School.
Spencer—High School.
Spencerville—High School.
Spiceland—*Academy.*
Star City—High School.
Staunton—High School.
Stilesville—High School.
Stillwell—High School.
Stinesville—High School.
Stockwell—High School.
Sullivan—High School.
Summitville—High School.
Swayzee—High School.
Sweetser—High School.
Syracuse—High School.
Tangier—High School.
Tell City—High School.
Terre Haute—
    Garfield High School.
    State Normal High School.
    *St. Joseph's Academy.*
    Wiley High School.
Thorntown—High School.
Tipton—
    High School.
    *St. Joseph's Academy.*
Topeka—High School.
Troy—High School.[1]
Union City—High School.
Union Mills—High School.
University Heights—*Indiana Central University.*
Upland—
    High School.
    *Taylor University.*
Urbana—High School.
Vallonia—High School.[1]
Valley Mills—High School.
Valparaiso—
    High School.
    *University.*
Van Buren—High School.

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[1] Commission expired June 30, 1914.

Veedersburg—High School.
Versailles—High School.
Vevay—High School.
Vincennes—
  *Academy.*
  High School.
  *St. Rose Academy.*
Wabash—
  High School.
  Linlawn High School.
Wakarusa—High School.[1]
Walkerton—High School.[1]
Walton—High School.[1]
Wanamaker—New Bethel High School.
Wanatah—High School.
Warren—High School.
Warsaw—High School.
Washington—High School.
Waterloo—High School.
Waveland—High School.
Waynetown—High School.
West Baden—High School.
Westfield—High School.
West Lafayette—High School.
Westland—High School.
West Lebanon—High School.
West Middleton—High School.[1]
West Newton—High School.
Westpoint—High School.
Westport—High School.[1]
West Terre Haute—High School.
Westville—High School.
Wheatfield—High School.
Wheatland—High School.
Wheeler—High School.
Whiteland—High School.
Whitestown—High School.[1]
White Water—High School.
Whiting—High School.
Wilkinson—High School.[1]
Williamsburg—High School.
Williamsport—High School.
Winamac—High School.
Winchester—
  High School.
  McKinley High School.
Windfall—High School.[1]
Wingate—High School.
Winona Lake—*Winona Academy.*
Wolcott—High School.
Wolcottville—High School.
Woodburn—Maumee Township High School.
Worthington—High School.
Young America—High School.
Zionsville—High School.

## IOWA.

Approved by the State board of education and accredited by the Iowa State University, May, 1914.

| | Units. |
|---|---|
| Admission requirements | 15 |
| Prescribed units: | |
| English | 3 |
| Mathematics | 2½ |
| History | 1 |
| Foreign language | 2 |
| Electives | 6½ |

Ackley—High School.
Adair—High School.
Adel—High School.
Afton—High School.
Agency—High School.
Albia—High School.
Alden—High School.
Algona—High School.
Allerton—High School.
Alta—High School.
Alton—High School.
Ames—High School.
Anamosa—High School.
Anita—High School.
Atlantic—High School.
Audubon—High School.
Aurelia—High School.
Avoca—High School.
Bancroft—*St. John's Parochial School.*
Bayard—High School.
Bedford—High School.
Belle Plaine—High School.
Bellevue—High School.
Belmond—High School.
Blairstown—High School.
Blockton—High School.
Bloomfield—High School.
Boone—High School.
Brighton—High School.
Britt—High School.
Brooklyn—High School.
Buffalo Center—High School.
Burlington—High School.
Burt—High School.
Calmar—High School.
Carroll—High School.
Cedar Falls—
  High School.
  Iowa State Teachers College, Training Department.
Cedar Rapids—High School.
Center Point—High School.
Centerville—High School.
Chariton—High School.
Charles City—High School.
Charter Oak—High School.
Cherokee—High School.
Clarinda—High School.
Clarksville—High School.
Clarence—High School.
Clarion—High School.
Clearfield—High School.
Clear Lake—High School.
Clinton—High School.

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[1] Commission expired June 30, 1914.

Coggon—High School.
Colfax—High School.
College Springs—High School.
Columbus Junction—High School.
Colo—High School.
Conrad—High School.
Coon Rapids—High School.
Corning—High School.
Correctionville—High School.
Corydon—High School.
Council Bluffs—High School.
Cresco—High School.
Creston—High School.
Dallas Center—High School.
Danbury—High School.
Davenport—
  High School.
  *St. Ambrose Collegiate Academy.*
  *St. Katherine's School.*
Decorah—High School.
Denmark—High School.
Denison—
  High School.
  *Denison Normal School.*
Des Moines—
  East High School.
  North High School.
  West High School.
  *Grand View Academy.*
De Witt—High School.
Dexter—High School.
Dows—High School.
Dubuque—
  High School.
  *Mount St. Joseph Academy.*
  *St. Joseph Academy.*
  *St. Joseph College Academy.*
Dunlap—High School.
Dysart—High School.
Eagle Grove—High School.
Earlham—High School.
Eddyville—High School.
Eldon—High School.
Eldora—High School.
Elkader—High School.
Elliott—High School.
Emerson—High School.
Emmetsburg—High School.
Essex—High School.
Estherville—High School.
Exira—High School.
Fairfield—
  High School.
  *Parsons College Academy.*
Farmington—High School.
Farragut—High School.
Fayette—High School.
Fonda—High School.
Fontanelle—High School.
Forest City—
  High School.
  *Waldorf College.*
Fort Dodge—High School.
Fort Madison—High School.
Galva—High School.
Garden Grove—High School.
Garner—High School.
Gilmore City—High School.
Gladbrook—High School.
Glenwood—High School.
Glidden—High School.
Goldfield—High School.
Greene—High School.
Greenfield—High School.
Griswold—High School.
Grinnell—High School.
Grundy Center—High School.
Guthrie Center—High School.
Guttenberg—High School.
Hamburg—High School.
Hampton—High School.
Harlan—High School.
Hartley—High School.
Hawarden—High School.
Hedrick—High School.
Hiteman—High School.
Holstein—High School.
Hubbard—High School.
Humboldt—High School.
Ida Grove—High School.
Independence—High School.
Indianola—High School.
Inwood—High School.
Iowa City—
  High School.
  *Iowa City Academy.*
  *St. Mary's High School.*
  *St. Patrick's High School.*
Iowa Falls—
  High School.
  *Ellsworth Academy.*
Jefferson—High School.
Jewell—
  High School.
  *Jewell Lutheran College.*
Kellogg—High School.
Keokuk—High School.
Keosauqua—High School.
Keota—High School.
Kingsley—High School.
Knoxville—High School.
Lake City—High School.
Lake Park—High School.
Lake Mills—High School.
Lamoni—High School.
Lansing—High School.
Laporte City—High School.
Larchwood—High School.
Lehigh—High School.
Le Mars—
  High School.
  *Western Union College Academy.*
Lenox—High School.
Leon—High School.
Lisbon—High School.
Livermore—High School.
Logan—High School.
Lyons—High School.
Malvern—High School.
Manchester—High School.
Manilla—High School.
Manning—High School.
Manson—High School.
Mapleton—High School.
Maquoketa—High School.
Marathon—High School.

Marcus—High School.
Marengo—High School.
Marion—High School.
Marshalltown—High School.
Mason City—High School.
McGregor—High School.
Mechanicsville—High School.
Mediapolis—High School.
Milford—High School.
Missouri Valley—High School.
Monona—High School.
Monroe—High School.
Montezuma—High School.
Monticello—High School.
Morning Sun—High School.
Moulton—High School.
Mount Ayr—High School.
Mount Pleasant—High School.
Mount Vernon—High School.
Murray—High School.
Muscatine—High School.
Nashua—High School.
Neola—High School.
Nevada—High School.
Newell—High School.
New Hampton—High School.
New London—High School.
New Providence—High School.
New Sharon—High School.
Newton—High School.
Nora Springs—High School.
North English—High School.
Northwood—High School.
Oakland—High School.
Odebolt—High School.
Oelwein—High School.
Ogden—High School.
Olin—High School.
Onawa—High School.
Orange City—
    High School.
    *North Western Classical Academy.*
Orient—High School.
Osage—
    *Cedar Valley Seminary.*
    High School.
Osceola—High School.
Oskaloosa—
    High School.
    *Penn College Academy.*
Ottumwa—High School.
Oxford—High School.
Panora—High School.
Parkersburg—High School.
Paullina—High School.
Pella—High School.
Perry—High School.
Pocahontas—High School.
Pomeroy—High School.
Prairie City—High School.
Preston—High School.
Primghar—High School.
Radcliffe—High School.
Randolph—High School.
Red Oak—High School.
Reinbeck—High School.
Riceville—High School.
Rockford—High School.
Rock Rapids—High School.
Rock Valley—High School.
Rockwell City—High School.
Roland—High School.
Rolfe—High School.
Ruthven—High School.
Sabula—High School.
Sac City—
    High School.
    *Institute.*
Sanborn—High School.
Schaller—High School.
Seymour—High School.
Sheffield—High School.
Shelby—High School.
Sheldon—High School.
Shell Rock—High School.
Shenandoah—High School.
Sibley—High School.
Sidney—High School.
Sigourney—High School.
Sioux Center—High School.
Sioux City—
    *Cathedral School.*
    High School.
Sioux Rapids—High School.
Sloan—High School.
Spencer—High School.
Spirit Lake—High School.
Springville—High School.
Stanwood—High School.
State Center—High School.
Storm Lake—High School.
Story City—High School.
Strawberry Point—High School.
Stuart—High School.
Sumner—High School.
Sutherland—High School.
Tabor—High School.
Tama—High School.
Tipton—High School.
Toledo—High School.
Traer—High School.
Union—High School.
University Park—*Central Holiness Academy.*
Ute—High School.
Valley Junction—High School.
Villisca—High School.
Vinton—
    High School.
    *Tilford Academy.*
Walnut—High School.
Wapello—High School.
Washington—High School.
Waterloo—
    (East)—High School.
    (West)—High School.
Waukon—High School.
Waverly—High School.
Webster City—High School.
Wellman—High School.
West Bend—High School.
West Branch—High School.
West Liberty—High School.
West Side—High School.
West Union—High School.
What Cheer—High School.
Whiting—High School.

Williamsburg—High School.
Wilton—High School.
Winfield—High School.
Winterset—High School.
Woodbine—
    High School.
    *Woodbine Normal School.*

## KANSAS.

Class I schools accredited by the University of Kansas, January, 1914.

| | Units. |
|---|---|
| Admission requirements | 15 |
| Prescribed units: | |
| English | 3 |
| Mathematics | 2½ |
| Foreign language | 3 |
| Science | 2 |
| History and social science | 1 |
| Electives | 3½ |

Abilene—High School.
Alden—High School.
Alma—High School.
Almena—High School.
Altamont—Labette County High School.
Altoona—High School.
Anthony—High School.
Argentine—High School.
Argonia—Dixon Township High School.
Arkansas City—High School.
Ashland—High School.
Atchison—High School.
Attica—High School.
Atwood—Rawlins County High School.
Augusta—High School.
Axtell—High School.
Baldwin—
    *Baker University Academy.*
    High School.
Basehor—High School.
Belle Plaine—High School.
Belleville—High School.
Beloit—High School.
Blue Rapids—High School.
Bonner Springs—High School.
Bucklin—High School.
Buffalo—High School.
Burden—High School.
Burlingame—High School.
Burlington—High School.
Burns—High School.
Burr Oak—High School.
Burrton—High School.
Caldwell—High School.
Caney—High School.
Canton—High School.
Cawker City—High School.
Chanute—High School.
Chapman—Dickinson County High School.
Cheney—High School.
Cherokee—
    Crawford County High School.
    Decatur County High School.
Cherryvale—High School.
Cimarron—High School.
Clay Center—Clay County High School.
Clearwater—High School.
Clifton—High School.
Clyde—High School.
Coffeyville—High School.
Colby—Thomas County High School.
Coldwater—High School.
Colony—High School.
Columbus—Cherokee County High School.
Concordia—
    High School.
    *Nazareth Academy.*
Conway Springs—High School.
Cottonwood Falls—Chase County High School.
Council Grove—High School.
Delphos—High School.
Derby—High School.
Dodge City—High School.
Douglass—High School.
Downs—High School.
Edwardsville—High School.
Effingham—Atchison County High School.
El Dorado—High School.
Ellinwood—High School.
Ellis—High School.
Ellsworth—High School.
Emporia—High School.
Enterprise—High School.
Erie—High School.
Eskridge—High School.
Eureka—High School.
Fairview—High School.
Florence—High School.
Formoso—High School.
Fort Scott—High School.
Fowler—High School.
Frankfort—High School.
Fredonia—High School.
Galena—High School.
Garden City—High School.
Garnett—High School.
Gas City—High School.
Girard—High School.
Goodland—Sherman County High School.
Great Bend—High School.
Greenleaf—High School.
Greensburg—Kiowa County High School.
Grenola—High School.
Gypsum—High School.
Halstead—High School.
Hanover—High School.
Harper—High School.
Hartford—High School.
Hays—High School.
Herrington—High School.
Hesston—*Academy.*
Hiawatha—High School.
Highland—High School.
Hill City—High School.
Hoisington—High School.
Holton—High School.
Horton—High School.
Howard—High School.

Hoxie—Sheridan County High School.
Humboldt—High School.
Hutchinson—High School.
Independence—Montgomery County High School.
Iola—High School.
Jetmore—High School.
Jewell City—High School.
Junction City—High School.
Kansas City—
    *Catholic High School.*
    High School.
    Sumner High School (colored).
    Wilson High School.
Kingman—High School.
Kinsley—High School.
Kiowa—High School.
La Crosse—High School.
La Cygne—High School.
La Harpe—High School.
Lakin—High School.
Lansing—High School.
Larned—High School.
Latham—High School.
Lawrence—High School.
Leavenworth—
    High School.
    *St. Mary's Academy.*
Lebanon—High School.
Leon—High School.
Le Roy—High School.
Lewis—High School.
Liberal—High School.
Lincoln—High School.
Lindsborg—High School.
Linwood—High School.
Little River—High School.
Logan—High School.
Lyndon—High School.
Macksville—High School.
Madison—High School.
Manhattan—High School.
Mankato—High School.
Marion—High School.
Marquette—High School.
Marysville—High School.
McPherson—High School.
Meade—High School.
Medicine Lodge—High School.
Minneapolis—High School.
Moline—High School.
Moran—High School.
Moundridge—High School.
Mount Hope—High School.
Mulvane—High School.
Neosho Falls—High School.
Neodesha—High School.
Ness City—High School.
Newton—
    *Bethel Academy.*
    High School.
Nickerson—Reno County High School.
Norton—
    High School.
    Norton County High School.
Nortonville—High School.
Norwich—High School.
Oberlin—Decatur County High School.
Oakley—High School.
Olathe—High School.
Onaga—High School.
Osage City—High School.
Osawatomie—High School.
Osborne—High School.
Oskaloosa—High School.
Oswego—High School.
Ottawa—
    High School.
    *Ottawa University Academy.*
Overbrook—High School.
Oxford—High School.
Paola—High School.
Parsons—High School.
Peabody—High School.
Perry—High School.
Phillipsburg—High School.
Plainville—High School.
Pittsburg—High School.
Pleasanton—High School.
Pratt—High School.
Protection—High School.
Ransom—High School.
Rosedale—High School.
Rose Hill—High School.
Rossville—High School.
Russell—High School.
St. Francis—Cheyenne County High School.
Sabetha—High School.
St. John—High School.
Salina—High School.
Sedan—High School.
Sedgwick—High School.
Seneca—High School.
Sharon—High School.
Sharon Springs—High School.
Smith Center—High School.
Solomon—High School.
Spearville—High School.
Spivey—High School.
Spring Hill—High School.
Stafford—High School.
Sterling—High School.
Stockton—High School.
Syracuse—High School.
Tonganoxie—High School.
Topeka—
    High School.
    *Washburn Academy.*
Troy—High School.
Valley Center—High School.
Valley Falls—High School.
Wa Keeney—High School.
Wamego—High School.
Washington—High School.
Waterville—High School.
Wathena—High School.
Waverly—High School.
Wellington—Sumner County High School.
Wellsville—High School.
Wetmore—High School.
White Water—High School.
Wichita—High School.
Williamsburg—High School.
Wilson—High School.
Winchester—High School.
Winfield—
    High School.
    *Southwestern Academy.*
Yates Center—High School.

## KENTUCKY.

**Class A schools accredited by the University of Kentucky, May, 1914.**

| | Units. |
|---|---|
| Admission requirements | 15 |
| Prescribed units: | |
| English | 3 |
| Mathematics | 2½ |
| Foreign language | 4 |
| History | 1 |
| Science | 1 |
| Electives | 3½ |

Ashland—High School.
Auburn—County High School.
Augusta—High School.
Barboursville—*Union College.*
Bowling Green—
  High School.
  West Kentucky Normal.
Carrollton—High School.
Central City—High School.
Catlettsburg—High School.
Clinton—*Marvin University School.*
Columbia—*Lindsey-Wilson.*
Covington—High School.
Cythiana—High School.
Dawson Springs—High School.
Dayton—High School.
Elizabethtown—Hardin County High School.
Falmouth—High School.
Flemingsburg—High School.
Frankfort—High School.
Franklin—High School.
Fulton—High School.
Georgetown—
  High School.
  *Cardome Academy.*
Glasgow—
  High School.
  *Liberty College.*
Greenville—High School.
Hardinsburg—County High School.
Harrodsburg—High School.
Hartford—High School.
Henderson—High School.
Hopkinsville—High School.
LaGrange—High School.
Lancaster—High School.
Lawrenceburg—
  City High School.
  High School.
Lebanon—High School.
Lexington—
  *Hamilton College.*
  High School.
  *Sayre College.*
London—*Sue Bennet Memorial.*
Louisa—High School.
Louisville—
  Girls' High School.
  Male High School.
  Manual Training High School.
Louisville—Continued.
  *St. Xavier College.*
  *Semple Collegiate School.*
  *Training School.*
  *University School.*
Ludlow—High School.
Lyndon—*Kentucky Military Institute.*
Madisonville—High School.
Mayfield—High School.
Maysville—High School.
Midway—*Kentucky Female Orphan School.*
Millersburg—
  *Female College.*
  *Military Institute.*
Morganfield—High School.
Mount Sterling—High School.
Murray—High School.
Nazareth—*Nazareth Academy.*
Newport—
  *Academy Notre Dame of Providence.*
  Bellevue High School.
  High School.
Nicholasville—High School.
Owensboro—
  High School.
  *Owensboro College.*
Owenton—High School.
Paducah—High School.
Paintsville—*Sandy Valley Seminary.*
Paris—High School.
Pikeville—*Collegiate Institute.*
Princeton—High School.
Richmond—
  Caldwell High School.
  Eastern Kentucky Normal.
  Model High School.
Russellville—*Bethel College, Preparatory Department.*
Shelbyville—
  High School.
  *Science Hall.*
Somerset—High School.
Stanford—High School.
Stanton—*Stanton College.*
Sturgis—High School.
Versailles—*Margaret College.*
Walton—High School.
Williamsburg—*Cumberland College.*
Wilmore—*Asbury College Academy.*
Winchester—High School.

## LOUISIANA.

Approved by the State board of education and accredited by the University of Louisiana, May, 1914.

| | Units. |
|---|---|
| Admission requirements | 14 |
| Prescribed units: | |
| English | 3 |
| Mathematics | 2½ |
| Modern language | 1 |
| History | 1 |
| Electives | 6½ |

Abbeville—High School.
Alexandria—High School.
Amite—High School.
Arcadia—High School.
Ashland—High School.
Athens—High School.
Bastrop—High School.
Baton Rouge—
  Central High School.
  High School.
Baywood—High School.
Benton—High School.
Bernice—High School.
Bienville—High School.
Boyce—High School.
Breaux Bridge—High School.
Brusly—High School.
Bunkie—High School.
Calhoun—High School.
Campti—High School.
Cataro—Grand Prairie High School.
Cheneyville—High School.
Clinton—High School.
Colfax—High School.
Colomb—Romeville High School.
Columbia—High School.
Cotton Valley—High School.
Coushatta—High School.
Covington—High School.
Crowley—High School.
Denham Springs—High School.
De Quincy—High School.
De Ridder—High School.
Dodson—High School.
Donaldsonville—High School.
Doyline—High School.
Dubach—High School.
Dutchtown—High School.
Ebenezer—High School.
Eros—High School.
Eunice—High School.
Evergreen—High School.
Farmerville—High School.
Florien—High School.
Forest Hill—High School.
Franklin—High School.
Franklinton—High School.
Georgetown—High School.
Gibsland—High School.
Goldonna—High School.
Gonzales—High School.
Grand Cane—High School.
Grayson—High School.
Gretna—High School.
Gueydan—High School.
Hammond—High School.
Harrisonburg—High School.
Haughton—High School.
Haynesville—High School.
Homer—High School.
Hope Villa—Oak Grove High School.
Hornbeck—High School.
Houma—Terrebonne High School.
Independence—High School.
Iota—High School.
Jackson—High School.
Jeanerette—High School.
Jena—High School.
Jennings—High School.
Labadieville—High School.
Lake Arthur—High School.
Lake Charles—High School.
Lake Providence—High School.
Lecompte—High School.
Leesville—
  High School.
  Bellevue High School.
Lockport—High School.
Logansport—High School.
Longstreet—High School.
Lutcher—High School.
Mansfield—High School.
Mansura—High School.
Many—High School.
Marion—High School.
Marksville—High School.
Marthaville—High School.
Melville—High School.
Mer Rouge—High School.
Merryville—High School.
Minden—High School.
Mineral—Wallace High School.
Monroe—High School.
Monterey—Central High School.
Morgan City—High School.
Napoleonville—High School.
New Iberia—High School.
Oakdale—High School.
Opelousas—High School.
Patterson—High School.
Pelican—High School.
Plain Dealing—High School.
Plaquemine—High School.
Pleasant Hill—High School.
Pollock—High School.
Ponchatoula—High School.
Rayne—High School.
Rayville—High School.
Reserve—High School.
Robeline—High School.
Shreveport—High School.
Simsboro—High School.
Slidell—High School.
Spring Hill—High School.

Stonewall—High School.
St. Francisville—High School.
St. Joseph—High School.
St. Martinville—High School.
Sulphur—High School.
Tallulah—High School.
Thibodaux—High School.
Verda—High School.
Vidalia—High School.
Vidrine—High School.
Ville Platte—High School.
Vinton—High School.
Vivian—High School.
Washington—High School.
Welsh—High School.
White Castle—High School.
Winnfield—High School.
Winnsboro—High School.
Zachary—High School.

Supplementary list of secondary schools accredited by the University of Louisiana.

"Graduates of each of the following secondary schools who have completed the four-year high-school course, or the equivalent, with admission credits amounting to 14 units, will be admitted to the freshman class."

Baton Rouge—*St. Vincent's Academy.*
Bogalusa—High School.
Donaldsonville—*St. Joseph's Commercial Institute.*
Greensburg—High School.
Houma—*Lorton Preparatory School.*
Kentwood—High School.
Monroe—Monroe City High School.
New Orleans—
    Boys' High School.
    Girls' High School.
New Orleans—Continued.
    *Chenet Institute.*
    *Ferrell's School.*
    *Harris Preparatory School.*
    *Holy Cross College.*
    *Home Institute.*
    *Isidore Newman Manual Training School.*
    *Rugby Academy.*
New Roads—*Poydras Academy.*

## MAINE.

"Class A" schools approved by the State superintendent of schools, for the year ended July, 1913. "Graduates of schools in class A may be admitted (to the University of Maine) upon their school records, provided they pursue a course of study including all the subjects required for admission to the college that they propose to enter, and a sufficient number of elective subjects to make up a total of 14 units."

| | |
|---|---|
| Prescribed units: | |
| English | 3 |
| Mathematics | 2½ |
| Foreign language | 4 |
| History | 1 |
| Elective | 3½ |

Abbott Village—High School.
Albion—High School.
Alfred—High School.
Ashland—High School.
Athens—*Somerset Academy.*
Auburn—High School.
Augusta—High School.
Bangor—High School.
Bar Harbor—Eden High School.
Bath—High School.
Belfast—High School.
Belgrade—High School.
Berwick—High School.
Bethel—*Gould's Academy.*
Biddeford—High School.
Bingham—High School.
Bluehill—*George Stevens Academy.*
Boothbay Harbor—High School.
Bowdoinham—High School.
Bradford—High School.
Brewer—High School.
Bridgton—High School.
Bridgewater Center—Bridgewater Classical Institute.
Bristol—High School.
Brooklin—High School.
Brownville—High School.
Brunswick—High School.
Bryant Pond—Woodstock High School.
Buckfield—High School.
Buxton Center—Buxton High School.
Bucksport—*East Maine Conference Seminary.*
Calais—Calais Academy.
Camden—High School.
South Portland—Cape Elizabeth High School.
Caribou—High School.
Castine—High School.
Charleston—*Higgins Classical Institute.*
Cherryfield—Cherryfield Academy.
Clinton—High School.
Columbia Falls—High School.
Corinna—Corinna Union Academy.
Cornish—High School.
Cumberland Center—*Greeley Institute.*
Danforth—High School.
Deer Isle—High School.
Dexter—High School.
Dixfield—High School.
Dresden Mills—*Bridge Academy.*
East Corinth—East Corinth Academy.
East Machias—*Washington Academy.*
Easton—High School.
Eastport—High School.
Eliot—High School.
Ellsworth—High School.
Exeter—High School.
Fairfield—High School.
Farmington—High School.

Fort Fairfield—High School.
Foxcroft—*Foxcroft Academy.*
Frankfort—High School.
Franklin—High School.
Freedom—*Freedom Academy.*
Freeport—High School.
Fryeburg—*Fryeburg Academy.*
Gardiner—High School.
Gorham—High School.
Gray—*Pennell Institute.*
Greenville—High School.
Guilford—High School.
Hallowell—High School.
Hampden—Hampden Academy.
Hartland—Hartland Academy.
Hinckley—*Good Will High School.*
Hebron—*Hebron Academy.*
Hollis Center—Hollis High School.
Houlton—High School.
  *Ricker Classical Institute.*
Island Falls—High School.
Islesboro—High School.
Jay—High School.
Jonesport—High School.
Kennebunk—High School.
Kennebunkport—High School.
Kents Hill—*Maine Wesleyan Seminary.*
Kezar Falls—Porter High School.
Kingfield—High School.
Kingman—High School.
Kittery—*Traip Academy.*
Lee—*Lee Normal Academy.*
Lewiston—High School.
Limerick—Limerick Academy.
Limestone—High School.
Limington—*Limington Academy.*
Lincoln—Mattanawcook Academy.
Lisbon Falls—High School.
Litchfield—*Litchfield Academy.*
Livermore Falls—East Livermore High School.
Lubec—High School.
Machias—High School.
Madison—High School.
Mars Hill—Aroonstook Central Institute.
Mechanic Falls—High School.
Millbridge—High School.
Millinocket—High School.
Milo—High School.
Monmouth—*Monmouth Academy.*
Monson—Monson Academy.
Mount Vernon—High School.
Newcastle—*Lincoln Academy.*
New Gloucester—High School.
Newport—High School.
New Sharon—High School.
Norridgewock—High School.
North Anson—*Anson Academy.*
North Berwick—High School.
North Bridgton—*Bridgton Academy.*
Northeast Harbor—Mount Desert High School.
Norway—High School.
Oakland—High School.
Old Orchard—High School.
Old Town—High School.
Orono—High School.
Oxford—High School.
Parsonsfield—*Parsonsfield Seminary.*
Patten—Patten Academy.
Phillips—High School.
Pittsfield—*Maine Central Institute.*
Portland—
  Deering High School.
  High School.
  *St. Joseph's Academy.*
  *Westbrook Seminary.*
Presque Isle—High School.
Princeton—High School.
Rangeley—High School.
Richmond—High School.
Rockland—High School.
Rockport—High School.
Rumford—High School.
Sabattus—Webster High School.
Saco—*Thornton Academy.*
Sanford—High School.
Sangerville—High School.
Scarboro—High School.
Searsport—High School.
Sherman—High School.
Skowhegan—High School.
Solon—High School.
South Berwick—*Berwick Academy.*
South China—Erskine Academy.
South Paris—Paris High School.
South Portland—High School.
Southwest Harbor—High School.
South Windam—Windam High School.
Springfield—*Eastern Maine Institute.*
Standish—High School.
Stonington—High School.
Strong—High School.
Tenants Harbor—St. George High School.
Thomaston—High School.
Topsham—High School.
Turner Center—Leavitt Institute.
Unity—High School.
Vanceboro—High School.
Vassalboro—*Oak Grove Seminary.*
Vinalhaven—High School.
Waldoboro—High School.
Warren—High School.
Washburn—High School.
Waterville—
  *Coburn Classical Institute.*
  High School.
Wells—High School.
Westbrook—High School.
West Sullivan—Sullivan High School.
Wilton—*Wilton Academy.*
Winslow—High School.
Winter Harbor—High School.
Winterport—High School.
Winthrop—High School.
Wiscasset—Wiscasset Academy.
Yarmouth—
  High School.
  *North Yarmouth Academy.*
York Village—York High School.

## MARYLAND.

First group—Public high schools approved by the State Board of Education of Maryland, December, 1914.

Conditions of approval of "First group" schools: A bona fide enrollment of 80 or more students; 4 or more academic teachers—full time or equivalent; a 4 years' course of at least 36 actual school weeks in each year; courses of study to conform to those prescribed by the State board of education; sufficient library and laboratory facilities.

Annapolis—High School.
Baltimore—
  City College.
  Eastern High School.
  High and Training School (colored).
  Polytechnic Institute.
  Western High School.
Brunswick—High School.
Cambridge—High School.
Catonsville—High School.
Centerville—High School.
Chestertown—High School.
Crisfield—High School.
Cumberland—Allegany County High School.
Denton—Caroline County High School.
Easton—High School.
Elkton—Cecil County High School.
Ellicott City—High School.
Frederick—
  Boys' High School.
  Girls' High School.
Frostburg—Beall High School.
Hagerstown—
  Boys' High School.
  Girls' High School.
Havre de Grace—High School.
Lonaconing—Central High School.
Oakland—High School.
Pocomoke City—High School.
Reistertown—Franklin High School.
Rockville—Montgomery County High School.
Salisbury—Wicomico County High School.
Snow Hill—High School.
Sparrows Point—High School.
Towson—High School.
Westminster—High School.

Second group—Recommended by the board of education as equipped to offer 14 units of college preparatory work.

Aberdeen—High School.
Barton—High School.
Bel Air—High School.
Berlin—Buckingham High School.
Calvert—Agricultural High School.
Chesapeake City—High School.
Clinton—Surrattsville High School.
Delmar—High School.
Federalsburg—High School.
Friendsville—High School.
Hurlock—High School.
Jarrettsville—High School.
Middletown—High School.
Mount Airy—High School.
North East—High School.
Oxford—High School.
Princess Anne—Washington High School.
Rock Hall—High School.
Sharptown—High School.
St. Michaels—High School.
Sandy Spring—Sherwood High School.
Sparks—Agricultural High School.
Street—Highland High School.
Stockton—High School.
Trappe—High School.
Westernport—High School.

## MASSACHUSETTS.

Public high schools not on the New England College Entrance Certificate Board list issued May 12, 1914, but approved by the State Board of Education of Massachusetts for the privilege of normal-school certification for 1914. For such certification 14 high-school units are required.

Amesbury—High School.
Ashfield—High School.
Boston—High School of Practical Arts.
Bourne—High School.
Braintree—High School.
Canton—High School.
Chatham—High School.
Chelmsford Center—High School.
Easton—High School.
East Bridgewater—High School.
Edgartown—High School.
Essex—High School.
Fairhaven—High School.
Great Barrington—High School.
Hardwick—High School.
Hopedale—High School.
Huntington—High School.
Lenox—High School.
Ludlow—High School.
Medfield—High School.
Mendon—High School.
Millbury—High School.
Millis—High School.
Northboro—High School.
North Chelmsford—High School.
Northfield—High School.
Oak Bluffs—High School.
Orleans—High School.
Oxford—High School.
Petersham—High School.

Plainville—High School.
Reading—High School.
Rockport—High School.
Shirley—High School.
Shrewsbury—High School.
Southboro—High School.
South Hadley—High School.
Spencer—High School.
Sterling—High School.
Stockbridge—High School.
Tisbury—High School.
Walpole—High School.
Watertown—High School.
Westboro—High School.
West Boylston—High School.
Weston—High School.
Wilmington—High School.

## MICHIGAN.

Accredited by the University of Michigan, July, 1914.

"Graduates of schools which have been placed by the university on the approved list are admitted without examination on presenting a recommendation, signed by the principal of the school, certifying that they have satisfactorily done all the work required for admission."

| | Units. |
|---|---|
| Admission requirements | 15 |
| Prescribed units: | |
| English | 3 |
| Mathematics | 2 |
| Foreign language | 2 |
| Science | 1 |
| (Two subjects of 3 units each from above.) | |
| Electives | 7 |

Adrian—High School.
Albion—High School.
Allegan—High School.
Alma—High School.
Alpena—High School.
Ann Arbor—
  High School.
  *St. Thomas's School.*
Armada—High School.
Athens—High School.
Bad Axe—High School.
Bangor—High School.
Battle Creek—High School.
Bay City (east side)—High School.
  (West side)—High School.
  High School.
  *Holy Rosary Academy.*
  *St. James Academy.*
  *St. Mary's School.*
Beacon—Champion High School.
Belding—High School.
Bellaire—High School.
Bellevue—High School.
Benton Harbor—High School.
Benzonia—*Academy.*
Berrien Springs—High School.
Bessemer—High School.
Big Rapids—
  High School.
  *Ferris Institute.*
Birmingham—High School.
Blissfield—East Blissfield High School.
Boyne City—High School.
Bronson—High School.
Brown City—High School.
Buchanan—High School.
Cadillac—High School.
Calumet—High School.
Caro—High School.
Carson City—High School.
Cass City—High School.
Cassopolis—High School.
Cedar Springs—High School.
Central Lake—High School.
Charlevoix—High School.
Charlotte—High School.
Cheboygan—High School.
Chelsea—High School.
Chesaning—High School.
Clare—High School.
Coldwater—High School.
Coleman—High School.
Coloma—High School.
Colon—High School.
Constantine—High School.
Coopersville—High School.
Corunna—High School.
Croswell—High School.
Crystal Falls—High School.
Decatur—High School.
Detroit—
  Cass High School.
  Central High School.
  Eastern High School.
  *Liggett School.*
  McMillan High School.
  *University School.*
  Western High School.
Dexter—High School.
Dollar Bay—High School.
Dowagiac—High School.
Dundee—High School.
Durand—High School.
East Jordan—High School.
Eaton Rapids—High School.
Elk Rapids—High School.
Elsie—High School.
Escanaba—High School.
Evart—High School.
Fenton—High School.
Flint—High School.
Flushing—High School.
Fowlerville—High School.
Frankfort—High School.
Fremont—High School.
Galesburg—High School.
Gaylord—High School.
Gladstone—High School.

Gladwin—High School.
Grand Haven—High School.
Grand Ledge—High School
Grand Rapids—
  *Academy.*
  *Catholic High School for Boys.*
  *Catholic High School for Girls.*
  Central High School.
  *John Calvin, Jr., Preparatory.*
  *Sacred Heart Academy.*
  Union High School.
Grass Lake—High School.
Grayling—High School.
Greenland—High School.
Greenville—High School.
Gwinn—High School.
Hancock—High School.
Harbor Beach—High School.
Harbor Springs—High School.
Hart—High School.
Hartford—High School.
Hastings—High School.
Highland Park—High School.
Hillsdale—High School.
Holland—High School.
Holly—High School.
Homer—High School.
Houghton—High School.
Howard City—High School.
Howell—High School.
Hudson—High School.
Imlay City—High School.
Ionia—High School.
Iron Mountain—High School.
Iron River—High School.
Ironwood—
  High School.
  *St. Ambrose School.*
Ishpeming—High School.
Ithaca—High School.
Jackson—High School.
Jonesville—High School.
Kalamazoo—
  High School.
  Normal Preparatory.
  *Nazareth Academy.*
Kalkaska—High School.
L'Anse—High School.
Lake Linden—High School.
Lake Odessa—High School.
Lansing—
  High School.
  *St. Mary's School.*
Lake View—High School.
Lapeer—High School.
Lawton—High School.
Leslie—High School.
Lowell—High School.
Ludington—
  High School.
  *St. Simon's School.*
Mancelona—High School.
Manchester—High School.
Manistee—High School.
Manistique—High School.
Manton—High School.
Marcellus—High School.
Marine City—High School.
Mariette—High School.
Marquette—High School.
Marshall—High School.
Mason—High School.
Mendon—High School.
Menominee—High School.
Midland—High School.
Milan—High School.
Millington—High School.
Monroe—
  High School.
  *St. Mary's Academy.*
Morenci—High School.
Mount Clemens—High School.
Mount Pleasant—
  High School.
  Normal Preparatory.
  *Sacred Heart Academy.*
Muskegon—
  High School.
  *St. Mary's School.*
Munising—High School.
Nashville—High School.
Nagaunee—High School.
Newaygo—High School.
New Baltimore—High School.
Newberry—High School.
Niles—High School.
North Branch—High School.
Northville—High School.
Norway—High School.
Olivet—High School.
Onaway—High School.
Ontonagon—High School.
Orion—High School.
Otsego—High School.
Ovid—High School.
Owosso—High School.
Oxford—High School.
Painesdale—High School.
Paw Paw—High School.
Pellston—High School.
Pentwater—High School.
Petoskey—High School.
Plainwell—High School.
Plymouth—High School.
Pontiac—High School.
Port Huron—High School.
Portland—High School.
Rapid River—High School.
Reading—High School.
Reed City—High School.
Republic—High School.
Richmond—High School.
River Rouge—High School.
Rochester—High School.
Rockford—High School.
Rockland—High School.
Romeo—High School.
Royal Oak—High School.
Saginaw—
  (East side)—High School.
    *St. Mary's School.*
  (South side)—*SS. Peter and Paul's School.*
  (West side)—High School.
St. Charles—High School.

St. Clair—High School.
St. Ignace—High School.
St. Johns—High School.
St. Joseph—High School.
St. Louis—High School.
Saline—High School.
Sandusky—High School.
Sault Ste. Marie—High School.
Saranac—High School.
Schoolcraft—High School.
Scottville—High School.
Sebewaing—High School.
Shelby—High School.
Shephard—High School.
South Grand Rapids—High School.
South Haven—High School.
Sparta—High School.
Spring Arbor—*Academy*.
Stanton—High School.
Sturgis—High School.
Tecumseh—High School.
Three Oaks—High School.
Three Rivers—High School.
Traverse City—High School.
Trenton—High School.
Union City—High School.
Vassar—High School.
Vicksburg—High School.
Vulcan—High School.
Wakefield—High School.
Watervliet—High School.
Wayne—High School.
West Branch—High School.
Williamston—High School.
Wyandotte—High School.
Yale—High School.
Ypsilanti—High School.
    Michigan State Normal College, Preparatory.
Zeeland—High School.

## MINNESOTA.

Approved by the Minnesota State Education Department and accredited by the University of Minnesota, July, 1914.

| | Units. |
|---|---|
| Admission requirements | 15 |
| Prescribed units: | |
| English | [1] 3-4 |
| Mathematics | 2+ |
| Electives | 7½-10 |

Ada—High School.
Adrian—High School.
Aitkin—High School.
Akeley—High School.
Albert Lea—
    High School.
    *Albert Lea College, Preparatory Department.*
Alden—High School.
Alexandria—High School.
Amboy—High School.
Annandale—High School.
Anoka—High School.
Appleton—High School.
Argyle—High School.
Arlington—High School.
Atwater—High School.
Aurora—High School.
Austin—High School.
Bagley—High School.
Barnesville—High School.
Belle Plaine—High School.
Bemidji—High School.
Benson—High School.
Bird Island—High School.
Biwabik—High School.
Blackduck—High School.
Blooming Prairie—High School.
Blue Earth—High School.
Brainerd—High School.
Breckenridge—High School.
Browns Valley—High School.
Buffalo—High School.
Buhl—High School.
Caledonia—High School.
Cambridge—High School.
Canby—High School.
Cannon Falls—High School.
Cass Lake—High School.
Chaska—High School.
Chatfield—High School.
Chisholm—High School.
Clarkfield—High School.
Cloquet—High School.
Cokato—High School.
Coleraine—
    Greenway High School.
    Olcott High School.
Collegeville—*St. John's College.*
Cottonwood—High School.
Crookston—High School.
Dassel—High School.
Dawson—High School.
Deer River—High School.
Delano—High School.
Detroit—High School.
Dodge Center—High School.
Duluth—
    *Cathedral High School for Boys.*
    *Cathedral High School for Girls.*
    Central High School.
    Industrial High School.
    *Villa Sancta Scholastica.*
Eagle Bend—High School.
East Grand Forks—High School.
Elbow Lake—High School.
Elk River—High School.
Elmore—High School.
Ely—High School.
Eveleth—High School.
Excelsior—High School.
Fairfax—High School.
Fairmont—High School.

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[1] If 3, must be accompanied by 4 units of foreign language.

- Faribault—
  - High School.
  - *Bethlehem Academy.*
  - *St. Mary's Hall.*
  - *Shattuck Military Academy.*
- Farmington—High School.
- Fergus Falls—
  - High School.
  - *Park Region Luther College.*
- Fertile—High School.
- Fosston—High School.
- Frazee—High School.
- Frontenac—*Villa Maria.*
- Fulda—High School.
- Gaylord—High School.
- Gilbert—High School.
- Glencoe—High School.
- Glenwood—High School.
- Graceville—High School.
- Grand Meadow—High School.
- Grand Rapids—High School.
- Granite Falls—High School.
- Hallock—High School.
- Halstad—High School.
- Harmony—High School.
- Hastings—High School.
- Hawley—High School.
- Hector—High School.
- Henderson—High School.
- Herman—High School.
- Heron Lake—High School.
- Hibbing—High School.
- Hinckley—High School.
- Hopkins—High School.
- Houston—High School.
- Howard Lake—High School.
- Hutchinson—High School.
- International Falls—High School.
- Jackson—High School.
- Janesville—High School.
- Jordan—High School.
- Kasota—High School.
- Kasson—High School.
- Kenyon—High School.
- Kerkoven—High School.
- Lake Benton—High School.
- Lake City—High School.
- Lake Crystal—High School.
- Lakefield—High School.
- Lake Park—High School.
- Lamberton—High School.
- Lanesboro—High School.
- Le Roy—High School.
- Le Sueur—High School.
- Le Sueur Center—High School.
- Litchfield—High School.
- Little Falls—High School.
- Long Prairie—High School.
- Luverne—High School.
- Lyle—High School.
- McIntosh—High School.
- Mabel—High School.
- Madelia—High School.
- Madison—High School.
- Mankato—High School.
- Mantorville—High School.
- Maple Lake—High School.
- Mapleton—High School.
- Marshall—High School.
- Milaca—High School.
- Minneapolis—
  - *Blake School for Boys.*
  - Central High School.
  - East High School.
  - *Graham Hall.*
  - *Minnesota College.*
  - North High School.
  - South High School.
  - *Stanley Hall.*
  - West High School.
- Minneota—High School.
- Montevideo—
  - High School.
  - *Windom Institute.*
- Montgomery—High School.
- Monticello—High School.
- Moorhead—
  - *Concordia College.*
  - High School.
- Mora—High School.
- Morris—High School.
- Morton—High School.
- Mountain Lake—High School.
- New Prague—High School.
- New Richland—High School.
- New Ulm—High School.
- Northfield—High School.
- North St. Paul—High School.
- Norwood—High School.
- Olivia—High School.
- Ortonville—High School.
- Osakis—High School.
- Owatonna—
  - High School.
  - *Pillsbury Academy.*
- Park Rapids—High School.
- Paynesville—High School.
- Pelican Rapids—High School.
- Perham—High School.
- Pine City—High School.
- Pine Island—High School.
- Pipestone—High School.
- Plainview—High School.
- Preston—High School.
- Princeton—High School.
- Red Lake Falls—High School.
- Red Wing—
  - *Academy of the Red Wing Seminary.*
  - High School.
  - *Lutheran Ladies' Seminary.*
- Redwood Falls—High School.
- Renville—High School.
- Rochester—High School.
- Royalton—High School.
- Rush City—High School.
- Rushford—High School.
- St. Charles—High School.
- St. Cloud—High School.
- St. James—High School.
- St. Joseph—*Convent of St. Benedict.*
- St. Louis Park—High School.
- St. Paul—
  - *Bethel Academy.*
  - Central High School.
  - Mechanic Arts High School.
  - Humboldt High School.

St. Paul—Continued.
  Johnson—High School.
  *St. Joseph Academy.*
  *St. Paul Academy.*
  *St. Thomas College.*
  *The Backus School for Girls.*
  *The College of St. Catherine.*
  *The Loomis School.*
St. Paul Park—*St. Paul's College.*
St. Peter—High School.
Sandstone—High School.
Sauk Center—High School.
Sauk Rapids—High School.
Shakopee—High School.
Sherburn—High School.
Slayton—High School.
Sleepy Eye—High School.
South St. Paul—High School.
Springfield—High School.
Spring Grove—High School.
Spring Valley—High School.
Staples—High School.
Stephen—High School.
Stewartville—High School.
Stillwater—High School.
Thief River Falls—High School.
Tracy—High School.
Two Harbors—High School.
Tyler—High School.
Virginia—High School.
Wabasha—High School.
Wadena—High School.
Walker—High School.
Warren—High School.
Waseca—High School.
Waterville—High School.
Wayzata—High School.
Welcome—High School.
Wells—High School.
West Concord—High School.
Wheaton—High School.
White Bear Lake—High School.
Willmar—High School.
Windom—High School.
Winnebago—High School.
Winona—
  High School.
  *St. Clare Seminary.*
Winthrop—High School.
Worthington—High School.
Young America—High School.
Zumbrota—High School.

## MISSISSIPPI.

Affiliated with the University of Mississippi for the year 1914-15.

| | Units. |
|---|---|
| Admission requirements | 14 |
| Prescribed units: | |
| English | 3 |
| Mathematics | 2½ |
| History | 2 |
| Electives | 6½ |

Aberdeen—High School.
Ackerman—High School.
Amory—High School.
Baldwyn—High School.
Batesville—High School.
Benton—Agricultural High School.
Biloxi—High School.
Blue Mountain—*Mississippi Heights Academy.*
Bogue Chitto—High School.
Booneville—High School.
Brandon—High School.
Brookhaven—High School.
Brooklyn—Agricultural High School.
Brooksville—High School.
Buena Vista—Agricultural High School.
Camden—Agricultural High School.
Canton—High School.
Centerville—High School.
Charleston—High School.
Clara—Agricultural High School.
Clarksdale—High School.
Cleveland—Agricultural High School.
Collins—High School.
Columbia—High School.
Columbus—High School.
Como—High School.
Corinth—High School.
Courtland—Agricultural High School.
Crystal Springs—High School.
Derma—Agricultural High School.
Durant—High School.
Ecru—High School.
Ellisville—
  High School.
  Agricultural High School.
Eupora—High School.
Fayette—County High School.
Flora—High School.
Florence—High School.
Forest—High School.
French Camp—*Academy.*
Goodman—Agricultural High School.
Greenville—High School.
Greenwood—High School.
Grenada—High School.
Gulfport—
  *Gulfcoast Military Academy.*
  High School.
Harperville—Agricultural High School.
Hattiesburg—High School.
Hazlehurst—High School.
Hernando—High School.
Hickory—High School.
Holly Springs—High School.
Houston—High School.
Indianola—High School.
Itta Bena—High School.
Jackson—High School.
Kilmichael—Agricultural High School.
Kosciusko—High School.
Kossuth—Agricultural High School.
Laurel—High School.
Leakesville—Agricultural High School.
Lena—Agricultural High School.

**Lexington**—High School.
**Long Beach**—High School.
**Long View**—Agricultural High School.
**Louisville**—High School.
**Lumberton**—High School.
**Maben**—High School.
**Macon**—High School.
**Magnolia**—High School.
**Mathiston**—*Bennett Academy.*
**Mendenhall**—Agricultural High School.
**Meridian**—High School.
**McComb**—High School.
**Meadville**—Agricultural High School.
**Mize**—Agricultural High School.
**Montrose**—*Mississippi Conference Training School.*
**Moorhead**—Agricultural High School.
**Moss Point**—High School.
**Mount Olive**—High School.
**Natchez**—
  High School.
  *Stanton College.*
**Nettleton**—High School.
**New Albany**—High School.
**Newton**—High School.
**Oakland**—Agricultural High School.
**Okolona**—High School.
**Olive Branch**—Agricultural High School.
**Oxford**—
  High School.
  Agricultural High School.
**Paris**—High School.
**Pascagoula**—High School.
**Pass Christian**—High School.
**Pelahatchie**—High School.
**Perkinston**—Agricultural High School.
**Pheba**—Agricultural High School.
**Philadelphia**—High School.
**Pittsboro**—High School.
**Pontotoc**—High School.
**Poplarville**—Agricultural High School.
**Port Gibson**—*Chamberlain-Hunt Academy.*
**Purvis**—Agricultural High School.
**Richton**—High School.
**Rosedale**—High School.
**Sardis**—High School.
**Scooba**—Agricultural High School.
**Senatobia**—High School.
**Shuqualak**—High School.
**Slaydon**—Agricultural High School.
**Starkville**—High School.
**Summit**—High School.
**Sumrall**—High School.
**Toccopola**—High School.
**Tupelo**—High School.
**Union**—High School.
**Union Church**—Agricultural High School.
**Vaiden**—High School.
**Vardaman**—High School.
**Verona**—High School.
**Vicksburg**—
  *All Saints' College.*
  High School.
**Washington**—*Jefferson Military Academy.*
**Water Valley**—High School.
**West Point**—
  High School.
  *Southern Christian College.*
**Wiggins**—High School.
**Winona**—High School.
**Woodville**—Agricultural High School.
**Yazoo City**—High School.

## MISSOURI.

Approved by the State superintendent of schools and accredited by the University of Missouri, March, 1914.

| | Units. |
|---|---|
| Admission requirements | 15 |
| Prescribed units: | |
| English | 3 |
| Mathematics | 2 |
| Foreign language | 2 |
| Electives | 8 |

**Adrain**—High School.
**Albany**—High School.
**Armstrong**—High School.
**Aurora**—High School.
**Belton**—High School.
**Bethany**—High School.
**Bloomfield**—High School.
**Bolivar**—High School.
**Bonne Terre**—High School.
**Boonville**—
  High School.
  *Kemper Military School.*
**Bosworth**—High School.
**Bowling Green**—High School.
**Braymer**—High School.
**Breckenridge**—High School.
**Brookfield**—High School.
**Brunswick**—High School.
**Butler**—High School.
**Cainesville**—High School.
**California**—High School.
**Camden Point**—*Missouri Christian College.*
**Cameron**—High School.
**Campbell**—High School.
**Canton**—High School.
**Cape Girardeau**—High School.
**Carrollton**—High School.
**Carterville**—High School.
**Carthage**—High School.
**Caruthersville**—High School.
**Centralia**—High School.
**Charleston**—High School.
**Chillicothe**—High School.
**Clarence**—High School.
**Clayton**—High School.
**Clinton**—High School.
**Columbia**—
  High School.
  University High School.
**De Soto**—High School.
**Dexter**—High School.
**Doniphan**—High School.

- Edina—High School.
- Eldon—High School.
- Eldorado Springs—High School.
- Elsberry—High School.
- Everton—High School.
- Excelsior Springs—High School.
- Fairfax—High School.
- Farmington—
  - *Carleton College.*
  - *Elmwood Seminary.*
  - High School.
- Fayette—
  - High School.
  - *Central College Academy.*
- Ferguson—High School.
- Flat River—High School.
- Fredericktown—High School.
- Fulton—High School.
- Gallatin—High School.
- Grant City—High School.
- Green City—High School.
- Greenfield—High School.
- Greenville—High School.
- Hamilton—High School.
- Hannibal—High School.
- Hardin—High School.
- Harrisonville—High School.
- Higginsville—High School.
- Holden—High School.
- Hopkins—High School.
- Huntsville—High School.
- Iberia—*Academy.*
- Independence—High School.
- Ironton—High School.
- Jackson—High School.
- Jefferson City—High School.
- Joplin—High School.
- Kansas City—
  - Central High School.
  - Manual Training High School.
  - Northeast High School.
  - *St. Teresa's Academy.*
  - Westport High School.
- Kennett—High School.
- Keytesville—High School.
- King City—High School.
- Kirksville—High School.
- Kirkwood—High School.
- Knobnoster—High School.
- Lamar—High School.
- Lancaster—High School.
- La Plata—High School.
- Lathrop—High School.
- Lebanon—High School.
- Lees Summit—High School.
- Lexington—
  - High School.
  - *Wentworth Military Academy.*
- Liberty—High School.
- Linneus—High School.
- Lockwood—High School.
- Louisiana—High School.
- Macon—High School.
- Maitland—High School.
- Malden—High School.
- Maplewood—High School.
- Marshall—High School.
- Maryville—High School.
- Maysville—High School.
- Memphis—High School.
- Mexico—High School.
- Milan—High School.
- Monett—High School.
- Monroe City—High School.
- Montgomery City—High School.
- Mound City—High School.
- Mountain Grove—High School.
- Mount Vernon—High School.
- Neosho—High School.
- Nevada—High School.
- New Franklin—High School.
- New Haven—High School.
- New London—High School.
- New Madrid—High School.
- Norborne—High School.
- Odessa—High School.
- Oregon—High School.
- Osceola—High School.
- Palmyra—High School.
- Paris—High School.
- Perry—High School.
- Perryville—High School.
- Peirce City—High School.
- Platte City—High School.
- Plattsburg—High School.
- Pleasant Hill—High School.
- Polo—High School.
- Poplar Bluff—High School.
- Princeton—High School.
- Richmond—High School.
- Ridgeway—High School.
- Rockport—High School.
- St. Charles—High School.
- St. Joseph—
  - Benton High School.
  - Central High School.
- St. Louis—
  - Central High School.
  - *Forest Park College Academy.*
  - Manual Training High School.
  - *Hosmer Hall.*
  - McKinley High School.
  - *Mary Institute.*
  - *Smith Academy.*
  - Soldan High School.
  - *St. Joseph's Academy.*
  - Yeatman High School.
- Salem—High School.
- Salisbury—High School.
- Savannah—High School.
- Sedalia—High School.
- Shelbina—High School.
- Shelbyville—High School.
- Sikeston—High School.
- Slater—High School.
- Springfield—High School.
- Stanberry—High School.
- Steelville—High School.
- Sweet Springs—High School.
- Trenton—High School.
- Troy—High School.
- Union—High School.
- Unionville—High School.
- Vandalia—High School.

Versailles—High School.
Warrensburg—High School.
Warsaw—High School.
Washington—High School.
Webb City—High School.
Webster Groves—High School.
Wellston—High School.
Wellsville—High School.
Weston—High School.
West Plains—High School.
Willow Springs—High School.
Windsor—High School.

## MONTANA.

Approved by the State board of education and accredited by the University of Montana, March, 1914.

| | Units. |
|---|---|
| Admission requirements | 15 |
| Prescribed units: | |
| English | 4 |
| Mathematics | 2 |
| Foreign language | 2 |
| Science | 1 |
| History | 1 |
| Electives | 5 |

Anaconda—High School.
Belt—High School.
Big Timber—High School.
Billings—High School.
Boulder—High School.
Bozeman—High School.
Butte—
- *Butte Business College.*
- *Central Catholic High School.*
- High School.

Chinook—High School.
Chouteau—High School.
Columbus—High School.
Conrad—High School.
Deer Lodge—High School.
Dillon—High School.
Eureka—High School.
Forsyth—High School.
Fort Benton—High School.
Glasgow—High School.
Glendive—High School.
Great Falls—
- High School.
- *Mount Angela Ursuline Academy.*

Hamilton—High School.
Harlowtown—High School.
Havre—High School.
Helena—
- High School.
- *Saint Vincent's Academy.*

Kalispell—High School.
Laurel—High School.
Lewistown—High School.
Libby—High School.
Livingston—High School.
Miles City—High School.
Missoula—
- High School.
- *Sacred Heart Academy.*

Moore—High School.
Plains—High School.
Philipsburg—High School.
Polson—High School.
Pony—High School.
Red Lodge—High School.
Roundup—High School.
Stevensville—High School.
Terry—High School.
Townsend—High School.
Virginia City—High School.
Victor—High School.
Whitehall—High School.

## NEBRASKA.

Schools accredited by the University of Nebraska for the year 1912-13.

| | Units. |
|---|---|
| Admission requirements | 15 |
| Prescribed units— | |
| English | 2 |
| Mathematics | 2 |
| Foreign language | 3 |
| Science | 1 |
| History | 1 |
| Electives | 6 |

Adams—High School.
Ainsworth—High School.
Albion—High School.
Alliance—High School.
Alma—High School.
Ansley—High School.
Arapahoe—High School.
Arlington—High School.
Ashland—High School.
Atkinson—High School.
Auburn—High School.
Aurora—High School.
Bancroft—High School.
Bartley—High School.
Battle Creek—High School.
Beatrice—High School.
Beaver City—High School.
Beaver Crossing—High School.
Bellevue—
- *Academy.*
- Pioneer Union High School.

Benkelman—High School.
Benson—High School.
Bertrand—High School.

Bethany—*Cotner Academy.*
Bladen—High School.
Blair—
    *Dana Academy.*
    High School.
Bloomfield—High School.
Bloomington—High School.
Blue Hill—High School.
Blue Springs—High School.
Brady—High School.
Bridgeport—High School.
Broken Bow—High School.
Burwell—High School.
Butte—High School.
Cambridge—High School.
Cedar Rapids—High School.
Central City—High School.
Chadron—High School.
Chester—High School.
Clarks—High School.
Clay Center—High School.
College View—*Union College Academy.*
Columbus—High School.
Cook—High School.
Cozad—High School.
Crawford—High School.
Creighton—High School.
Crete—
    *Doane Academy.*
    High School.
Culbertson—High School.
Davenport—High School.
David City—High School.
Diller—High School.
Dodge—High School.
Edgar—High School.
Edison—High School.
Elgin—High School.
Elmwood—High School.
Emerson—High School.
Eustis—High School.
Exeter—High School.
Fairbury—High School.
Fairfield—High School.
Fairmount—High School.
Falls City—High School.
Franklin—
    *Academy.*
    High School.
Fremont—High School.
Friend—High School.
Fullerton—High School.
Geneva—High School.
Genoa—High School.
Gering—High School.
Gibbon—High School.
Giltner—High School.
Gordon—High School.
Gothenburg—High School.
Grand Island—
    *Academy.*
    High School.
Greeley—High School.
Greenwood—High School.
Gretna—High School.
Guide Rock—High School.
Hardy—High School.
Hartington—High School.
Harvard—High School.
Hastings—
    *Academy.*
    High School.
    *Immaculate Conception Academy.*
Havelock—High School.
Hebron—High School.
Holdrege—High School.
Hooper—High School.
Humboldt—High School.
Indianola—High School.
Jackson—
    High School.
    *St. Catherine Academy.*
Kearney—High School.
Kenesaw—High School.
Kimball—County High School.
Laurel—High School.
Lawrence—High School.
Lexington—High School.
Liberty—High School.
Lincoln—
    High School.
    *Nebraska Military Academy.*
    *St. Theresa's High School.*
    School of Agriculture, University of Nebraska.
    Teachers College High School, University of Nebraska.
Lodge Pole—High School.
Louisville—High School.
Loup City—High School.
Lyons—High School.
McCook—High Schoool.
Madison—High School.
Mead—High School.
Meadow Grove—High School.
Merna—High School.
Minden—High School.
Mitchell—High School.
Nebraska City—
    High School.
    *St. Bernard Academy.*
Neligh—
    *Gates Academy.*
    High School.
Nelson—High School.
Newman Grove—High School.
Norfolk—High School.
North Bend—High School.
North Platte—High School.
Oakdale—High School.
Oakland—High School.
Ogallala—High School.
Ohiowa—High School.
Omaha—
    *Brownell Hall.*
    *Creighton Academy.*
    High School.
    *Mount St. Mary's Seminary*
    *Sacred Heart Academy.*
    *Sacred Heart High School.*
O'Neill—
    High School.
    *St. Mary's Academy.*
Orchard—High School.
Ord—High School.
Orleans—High School.
Osceola—High School.

Overton—High School.
Oxford—High School.
Papillion—High School.
Pawnee City—High School.
Pender—High School.
Pierce—High School.
Plainview—High School.
Plattsmouth—High School.
Ponca—High School.
Randolph—High School.
Ravenna—High School.
Red Cloud—High School.
St. Edward—High School.
St. Paul—High School.
Sargent—High School.
Schuyler—High School.
Scottsbluff—High School.
Scribner—High School.
Seward—High School.
Shelby—High School.
Shelton—High School.
Sidney—High School.
Silver Creek—High School.
South Omaha—High School.
Spalding—*Academy.*
Spencer—High School.
Springfield—High School.
Stanton—High School.
Sterling—High School.
Stratton—High School.
Stromsburg—High School.
Stuart—High School.
Superior—High School.
Sutton—High School.
Syracuse—High School.
Table Rock—High School.
Tecumseh—High School.
Tekamah—High School.
Tilden—High School.
Trenton—High School.
Ulysses—High School.
University Place—
    High School.
    *Nebraska Wesleyan Academy.*
Valentine—High School.
Valley—High School.
Wahoo—
    High School.
    *Luther Academy.*
Wakefield—High School.
Waterloo—High School.
Wayne—High School.
Weeping Water—
    *Academy.*
    High School.
West Point—High School.
Wilber—High School.
Wisner—High School.
Wood River—High School.
Wymore—High School.
York—High School.

## NEVADA.

Fully accredited by the University of Nevada, November, 1914.

"Graduates of such accredited high schools may, on the recommendation of their teacher, be admitted to the university in the subjects in which their school has been accredited, but in all other subjects an examination will be required."

| | Units. |
|---|---|
| Admission requirements | 15 |
| Prescribed units: | |
| English | 3 |
| Mathematics | 2 |
| History | 2 |
| Science | 1 |
| Foreign language | 4 |
| Elective | 3 |

Carson City—High School.
Elko—High School.
Ely—High School.
Fallon—High School.
Gardnerville—High School.
Goldfield—High School.
Lovelock—High School.
Reno—High School.
Sparks—High School.
Tonopah—High School.
Virginia City—High School.
Winnemucca—High School.
Yerington—High School.

## NEW HAMPSHIRE.

"First-class" schools, approved by the New Hampshire Department of Public Instruction, May, 1914. These schools have four-year courses, and graduation is on at least 14 units.

Alton—High School.
Andover—*Proctor Academy.*
Antrim—High School.
Ashland—High School.
Atkinson—*Atkinson Academy.*
Bath—High School.
Berlin—High School.
Bethlehem—High School.
Claremont—Stevens High School.
Colebrook—Colebrook Academy.
Concord—
    High School.
    *St. Mary's School.*
Contoocook—Hopkinton High School.
Derry—*Pinkerton Academy.*
Dover—High School.
Enfield—High School.
Epping—High School.

Exeter—
    *Robinson Seminary.*
    Tuck High School.
Farmington—High School.
Franconia—*Dow Academy.*
Franklin—High School.
Goffstown—High School.
Gorham—High School.
Groveton—High School.
Hampstead—High School.
Hampton—Hampton Academy.
Hanover—High School.
Haverhill—Haverhill Academy.
Henniker—High School.
Hillsborough—High School.
Hinsdale—High School.
Hollis—High School.
Jaffrey (East)—Conant High School.
Jefferson—High School.
Keene—High School.
Kingston—*Sanborn Seminary.*
Laconia—High School.
Lancaster—High School.
Lebanon—
    High School.
    (West)—High School.
Lincoln—High School.
Lisbon—High School.
Littleton—High School.
Manchester—
    High School.
    *St. Anselm's College.*
Marlborough—High School.
Meriden—*Kimball Union Academy.*
Merrimack (Reed's Ferry)—*McGaw Institute.*
Milford—High School.
Milton—*Nute High School.*
Nashua—High School.
New Hampton—*Literary Institution.*
New Ipswich—*Appleton Academy.*
New London—*Colby Academy.*
Newmarket—High School.
Newport—High School.
Northwood Centre—*Coes Academy.*
Pembroke—*Pembroke Academy.*
Penacook—High School.
Peterborough—High School.
Pittsfield—High School.
Plymouth—High School.
Portsmouth—High School.
Rochester—High School.
Somersworth—High School.
Strafford Center—*Austin-Cate Academy.*
Stratford (North)—High School.
Sunapee—High School.
Tilton—*Tilton Seminary.*
Walpole—High School.
Warner—Simonds Free High School.
Whitefield—High School.
Wilton—High School.
Winchester—High School.
Woodsville—High School.

## NEW JERSEY.

Approved by the New Jersey State Board of Education, September, 1914.

"Approved high schools" must maintain curricula covering four full years of work approved by the State board of education; the school year must run at least 38 weeks; the recitation periods must average 40 minutes in length; the teaching force must consist of not less than three teachers; the building must be adequate, and must be provided with ample laboratory and library facilities.

Asbury Park—High School.
Atlantic City—High School.
Atlantic Highlands—High School.
Bayonne—High School.
Belleville—High School.
Belvidere—High School.
Bernardsville—Bernards High School (Township).
Blairstown—
    *Blair Hall.*
    High School.
Bloomfield—
    *German Theological School.*
    High School.
Boonton—High School.
Bordentown—
    *Bordentown Military Institute.*
    High School.
Bound Brook—High School.
Bridgeton—
    High School.
    *Ivy Hall.*
Burlington—High School.
Butler—High School.
Caldwell—
    High School.
    *Mount St. Dominic Academy.*
Camden—High School.
Cape May City—High School.
Cape May Court House—High School.
Chatham—High School.
Clayton—High School.
Clifton—High School (Township)
Clinton—High School.
Closter—High School.
Collingswood—High School.
Convent—
    *St. Elizabeth's College, School of Pedagogy.*
    *St. Elizabeth's Preparatory School.*
Cranford—High School.
Dover—High School.
East Orange—High School.
Elizabeth—
    High School.
    *Pingry School.*
    *St. Patrick's High School.*
    *Vail-Deane School.*
Elmer—High School.
Englewood—
    *Dwight School for Girls.*
    High School.
Essex Fells—*Kingsley School for Boys.*
Flemington—High School.
Fort Lee—*Holy Angels Academy.*
Freehold—
    High School.
    *New Jersey Military Academy.*

Glassboro—High School.
Glen Ridge—High School.
Gloucester City—High School.
Hackensack—High School (Township).
Hackettstown—
    *Centenary Collegiate Institute.*
    High School.
Haddonfield—High School.
Haddon Heights—High School.
Hamburg—High School (Township).
Hammonton—High School.
Harrison—High School.
High Bridge—High School.
Hightstown—*Peddie Institute.*
Hoboken—
    High School.
    *Sacred Heart Academy.*
    *Stevens Preparatory School.*
Hopewell—High School.
Irvington—High School.
Jamesburg—High School.
Jersey City—
    Dickinson High School.
    Lincoln High School.
    *St. Aloysius Academy.*
    *St. Dominic's Academy.*
    *St. Peter's High School.*
Kearney—High School.
Kenilworth—*Upsala College.*
Keyport—High School.
Lakewood—
    High School.
    *Lakewood School.*
Lambertville—High School.
Lawrenceville—*Lawrenceville School.*
Leonardo—High School (Township).
Leonia—High School.
Lindon—High School.
Long Branch—
    High School.
    *Star of the Sea Academy.*
Madison—High School.
Manasquan—High School.
Matawan—High School.
Metuchen—High School.
Millburn—High School (Township).
Millville—High School.
Montclair—
    *Academy.*
    High School.
Moorestown—
    *Friends' Academy.*
    *Friends' High School.*
    High School.
Morristown—
    High School.
    *Morris Academy.*
    *Morristown School.*
Mount Holly—High School (Township).
Netcong—High School.
Newark—
    *Academy.*
    Barringer High School.
    Central High School.
    East Side High School.
    South Side High School.
    *St. Benedict's College, Academic Department.*

Newark—Continued.
    *St. Mary's Academy.*
    *St. Vincent's Academy.*
    *Miss Townsend's School.*
New Brunswick—
    High School.
    *Rutgers Preparatory School.*
    *St. Peter's School.*
Newton—*English and Classical School.*
Nutley—High School.
Ocean City—High School.
Ocean Grove—High School (Township).
Orange—
    *Miss Beard's School for Girls.*
    *Cartaret Academy.*
    *Dearborn-Morgan School.*
    High School.
Palmyra—High School.
Park Ridge—High School.
Passaic—High School.
Paterson—
    High School.
    *Hoover School.*
Paulsboro—High School.
Pemberton—High School.
Pennington—*Seminary.*
Penns Grove—High School.
Perth Amboy—High School.
Phillipsburg—High School.
Plainfield—
    *College of Mount St. Mary, Academic Department.*
    High School.
    *Leal School for Boys.*
    North Plainfield High School.
Point Pleasant—High School.
Princeton—
    High School.
    *Preparatory School.*
Rahway—High School.
Ramsey—High School.
Red Bank—High School.
Ridgefield Park—High School.
Ridgewood—High School.
Rockaway—High School.
Roselle—High School.
Roselle Park—High School.
Rutherford—High School.
Salem—High School.
Shiloh—High School (Township).
Somerville—High School.
South Amboy—High School.
South Orange—
    High School.
    *Seton Hall College, Academic Department.*
South River—High School.
Succasunna—High School (Township).
Summit—
    *Carlton Academy.*
    High School.
    *Kent Place School for Girls.*
Sussex—High School.
Toms River—High School (Township).
Town of Union—High School.
Trenton—
    High School.
    *Sacred Heart Academy.*

Trenton—Continued.
    *St. Mary's High School.*
    State Model High School.
Tuckahoe—High School (Township).
Tuckerton—High School.
Verona—High School.
Vineland—High School (Township).
Washington—High School.
Wenonah—*Military Academy.*
Westfield—High School.
West Hoboken—
    High School.
    *St. Michael's Monastery.*
West Orange—High School.
Westwood—High School.
Wildwood—High School.
Woodbine—High School.
Woodbridge—High School.
Woodbury—High School.
Woodstown—High School.

## NEW MEXICO.

Tentative list of public high schools accredited by the University of New Mexico, May, 1914.

The university has as yet made no formal list of accredited schools, but states that the work of the following schools is accepted in whole or in part fulfillment of the university admission requirements.

| | Units. |
|---|---|
| Admission requirements | 15 |
| Prescribed units: | |
| English | 3 |
| Mathematics | 2½ |
| Language | 2 |
| Science | 1 |
| History | 1 |
| Electives | 5½ |

Alamogordo—High School.
Albuquerque—
    High School.
    University of New Mexico, Preparatory Department.
Artesia—High School.
Aztec—High School.
Carlsbad—High School.
Carrizozo—High School.
Clayton—High School.
Clovis—High School.
Deming—High School.
Farmington—High School.
East Las Vegas—Las Vegas High School.
Portales—High School.
Raton—High School.
Roswell—High School.
Santa Fe—High School.
Santa Rosa—High School.
Tucumcari—High School.

The Department of Education of New Mexico gives the following list of high schools whose course of study would probably conform to the conditions for approval passed by the State board of education, February 4, 1914.

| | Units. |
|---|---|
| Graduation requirements for approved course of study | 15 |
| Prescribed units: | |
| English | 3 |
| Mathematics | 2 |
| Foreign language | 2 |
| History | 1½ |
| Science | 1½ |
| Industrial education | ½ |
| Civics | ½ |
| Electives | 4 |

Albuquerque—
    High School.
    University of New Mexico, Preparatory Department.
Artesia—High School.
Carlsbad—High School.
Clovis—High School.
Deming—High School.
East Las Vegas—
    Las Vegas High School.
    New Mexico Normal University, Preparatory Department.
Farmington—High School.
Gallup—High School.
Raton—High School.
Roswell—
    High School.
    New Mexico Military Institute.
Santa Fe—High School.
Silver City—New Mexico Normal School, Preparatory Department.
State College—New Mexico College of Agriculture and Mechanic Arts.
Tucumcari—High School.

## NEW YORK.

**"State or incorporated high schools for instruction in secondary branches of education, but not authorized to confer degrees, and such high schools, academic departments, and union schools, and similar incorporated schools as are admitted by the regents of the university as of academic grade," excluding all institutions or schools which are not registered as affording suitable facilities for maintaining an approved course of four years of academic work.—**Handbook No. 24, State of New York, Education Department, October, 1914.

- Adams—High School.
- Addison—High School.
- Afton—High School.
- Akron—High School.
- Albany—
  - *Academy of the Holy Names.*
  - *Albany Academy.*
  - *Albany Academy for Girls.*
  - *Cathedral Academy.*
  - *Christian Brothers Academy.*
  - *Female Academy of Sacred Heart.*
  - High School.
  - New York State Normal College, High School Department.
  - *St. Agnes School.*
  - *St. John's Academy.*
  - *St. Joseph's Academy.*
- Albion—High School.
- Alden—High School.
- Alexander—High School.
- Alexandria Bay—High School.
- Alfred—
  - *Alfred Academy.*
  - Union School.
- Allegany—
  - High School.
  - *St. Bonaventure's College.*
  - *St. Elizabeth's Academy.*
- Almond: High School.
- Altamont—High School.
- Amenia—High School.
- Amityville—
  - High School.
  - *Queen of the Rosary Academy.*
- Amsterdam—
  - High School.
  - *St. Mary's Catholic Institute.*
- Andes—Hilton Memorial High School.
- Andover—High School.
- Angelica—Wilsonian High School.
- Angola—High School.
- Antwerp—High School.
- Arcade—High School.
- Argyle—High School.
- Attica—High School.
- Auburn—High School.
- Aurora—*Cayuga Lake Academy.*
- Ausable Forks—High School.
- Avoca—High School.
- Avon—High School.
- Babylon—High School.
- Bainbridge—High School.
- Baldwin—High School.
- Baldwinsville—Free Academy.
- Ballston Spa—High School.
- Barker—High School.
- Batavia—High School.
- Bath—Haverling High School.
- Bay Shore—High School.
- Belfast—High School.
- Belleville—
  - High School.
  - *Union Academy of Belleville.*
- Belmont—High School.
- Berlin—High School.
- Bergen—High School.
- Binghamton—
  - High School.
  - *St. Joseph's Academy.*
- Black River—High School.
- Blasdell—High School.
- Bolivar—High School.
- Boonville—High School.
- Brasher Falls—Brasher and Stockholm High School.
- Brentwood—*Academy of St. Joseph.*
- Brewster—High School.
- Bridgehampton—High School.
- Brocton—High School.
- Brookfield—High School.
- Brooklyn—
  - *Adelphi Academy.*
  - Bay Ridge High School.
  - *Berkeley Institute for Young Ladies.*
  - Boys' High School.
  - *Brooklyn College, High School Department.*
  - Bushwick High School.
  - Commercial High School.
  - Eastern District High School.
  - Erasmus Hall High School.
  - Girls' High School.
  - Manual Training High School.
  - *Packer Collegiate Institute.*
  - *Polytechnic Institute of Brooklyn.*
  - *St. Agnes Female Seminary.*
  - *St. Angela's Hall Academy.*
  - *St. Francis Academy.*
  - *St. Francis Xavier's Academy.*
  - *St. James Academy of Brooklyn.*
  - *St. John's Academy of Brooklyn.*
- Brownville—Brownville-Glen Park High School.
- Brushton—High School.
- Buffalo—
  - *Academy of Sacred Heart.*
  - *Buffalo Seminary.*
  - *Canisius College, Academic Department.*
  - Central High School.
  - *Holy Angels Academy.*
  - *Holy Angels Collegiate Institute.*
  - *Institute of Sisters of St. Joseph.*
  - Lafayette High School.
  - *Mary Immaculate Academy.*
  - Masten Park High School.
  - *Mount Mercy Academy.*

Buffalo—Continued.
- *Nichols School of Buffalo.*
- *St. Joseph's Collegiate Institute.*
- *St. Margaret's School.*
- *St. Mary's Academy and Industrial Female School.*
- Technical High School.

Caledonia—High School.
Cambridge—High School.
Camden—High School.
Camillus—High School.
Canajoharie—High School.
Canandaigua—*Academy.*
Canaseraga—High School.
Canastota—High School.
Candor—High School.
Canisteo—High School.
Canton—High School.
Cape Vincent—High School.
Carmel—
- *Drew Seminary for Young Women.*
- High School.

Carthage—
- *Augustinian Academy.*
- High School.
- West Carthage High School.

Castile—High School.
Catskill—
- Free Academy.
- *St. Patrick's Academy.*

Cato—High School.
Cattaraugus—High School.
Cazenovia—
- *Cazenovia Seminary.*
- Union School.

Center Moriches—High School.
Central Square—High School.
Champlain—High School.
Charlotte—High School.
Chateaugay—High School.
Chatham—High School.
Chautauqua—High School.
Cherry Creek—High School.
Cherry Valley—High School.
Chester—High School.
Chittenango—Yates High School.
Churchville—High School.
Clarence—Parker High School.
Clayton—High School.
Clayville—High School.
Clifton Springs—High School.
Clinton—High School.
Clyde—High School.
Clymer—High School.
Cobleskill—High School.
Coeymans—High School.
Cohocton—High School.
Cohoes—
- Egberts High School.
- *St. Bernard's Academy.*

Cold Spring—Haldane High School.
Collins Center—Union School.
Cooperstown—High School.
Copenhagen—High School.
Corfu—High School.
Corinth—High School.
Corning—
- Corning Free Academy.
- Northside High School.

Cornwall—High School.
Cornwall-on-Hudson—
- High School.
- *New York Military Academy.*
- *The Stone School.*

Cortland—High School.
Coxsackie—High School.
Cuba—High School.
Dansville—High School.
Delevan—High School.
Delhi—Delaware Academy and Union School.
Depew—High School.
Deposit—High School.
DeRuyter—High School.
Dexter—High School.
Dobbs Ferry—
- High School.
- *Misses Masters School.*

Dolgeville—High School.
Dover Plains—High School.
Downsville—High School.
Dryden—High School.
Dundee—High School.
Dunkirk—
- High School.
- *St. Mary's Academy.*

Earlville—High School.
East Aurora—High School.
East Bloomfield—High School.
East Hampton—High School.
East Pembroke—High School.
East Rochester—High School.
East Syracuse—High School.
Edmeston—High School.
Elba—High School.
Elbridge—High School and Academy.
Elizabethtown—High School.
Ellenville—High School.
Ellicottville—High School.
Ellington—High School.
Elmhurst—Newtown High School.
Elmira—Free Academy.
Elmira Heights—High School.
Essex—High School.
Evans Mills—High School.
Fabius—High School.
Fair Haven—High School.
Fairport—High School.
Falconer—High School.
Far Rockaway—High School.
Fayetteville—High School.
Fillmore—High School.
Fishkill-on-Hudson—High School.
Florida—S. S. Seward Institute.
Flushing—High School.
Fonda—High School.
Fordham—*St. John's College High School, Fordham University.*
Forestville—Free Academy.
Fort Ann—Union School.
Fort Covington—High School.

**Fort Edward**—
  *Collegiate Institute.*
  High School.
**Fort Plain**—High School.
**Frankfort**—High School.
**Franklin**—
  *Academy.*
  Delaware Literary Institute and Union School.
**Franklinville**—Ten Broeck Free Academy.
**Freeport**—High School.
**Freeville**—
  High School.
  Hunt Memorial School.
**Frewsburg**—High School.
**Friendship**—High School.
**Fulton**—High School.
**Fultonville**—High School.
**Gainesville**—High School.
**Garden City**—*Cathedral School of St. Mary.*
**Gardenville**—High School.
**Geneva**—High School.
**Gilbertsville**—High School.
**Glen Cove**—High School.
**Glens Falls**—
  *Academy.*
  High School.
  *St. Mary's Academy.*
**Gloversville**—High School.
**Goshen**—High School.
**Gouverneur**—High School.
**Gowanda**—High School.
**Granville**—High School.
**Great Neck**—High School.
**Greene**—High School.
**Greenport**—High School.
**Greenwich**—High School.
**Griegsville**—High School.
**Griffin Corners**—Griffin-Fleischmann's High School.
**Groton**—High School.
**Hamburg**—High School.
**Hamilton**—High School.
**Hammondsport**—High School.
**Hancock**—High School.
**Hannibal**—High School.
**Hardwick**—*Hardwick Seminary, Academic Department.*
**Harrison**—High School.
**Harrisville**—High School.
**Hastings upon Hudson** — Hastings-on-Hudson High School.
**Haverstraw**—High School.
**Hempstead**—High School.
**Herkimer**—High School.
**Hermon**—High School.
**Highland**—High School.
**Highland Falls**—
  High School.
  *Lady Cliff Academy.*
**Hillsdale**—High School.
**Hilton**—High School.
**Hobart**—High School.
**Holland Patent**—High School.
**Holley**—High School.
**Homer**—Academy and Union School.
**Honeoye**—High School.
**Honeoye Falls**—High School.
**Hoosick Falls**—
  High School.
  *St. Mary's Academy.*
**Hornell**—High School.
**Horseheads**—High School.
**Houghton**—*Houghton Wesleyan Methodist Seminary.*
**Hudson**—High School.
**Hudson Falls**—High School.
**Hunter**—High School.
**Huntington**—High School.
**Ilion**—High School.
**Indian Lake**—Indian Lake School.
**Interlaken**—High School.
**Irvington**—High School.
**Islip**—High School.
**Ithaca**—
  *Cascadilla School.*
  High School.
  *The Sturgis School.*
**Jamaica**—High School.
**Jamestown**—High School.
**Jamesville**—High School.
**Jefferson**—High School.
**Johnstown**—High School.
**Jordan**—Free Academy.
**Katonah**—High School.
**Keeseville**—High School.
**Kenmore**—High School.
**Kenwood**—*Female Academy of Sacred Heart.*
**Keuka Park**—*Keuka Institute.*
**Kingston**—
  Kingston Free Academy.
  Ulster Free Academy.
**Lackawanna**—High School.
**Lake George**—High School.
**Lakemont**—*Palmer Institute, Starkey Seminary.*
**Lake Placid**—High School.
**Lake Placid Club**—*Lake Placid School.*
**Lakewood**—High School.
**Lancaster**—
  High School.
  *St. Mary's High School.*
**Lansingburg**—High School.
**Lawrence**—High School.
**Le Roy**—High School.
**Lestershire**—High School.
**Liberty**—High School.
**Lima**—*Genesee Wesleyan Seminary.*
**Limestone**—High School.
**Little Falls**—
  High School.
  *St. Mary's Academy.*
**Little Valley**—High School.
**Liverpool**—High School.
**Livingston Manor**—High School.
**Livonia**—High School.
**Lockport**—
  High School.
  *St. Joseph's Academy and Industrial Female School.*
**Locust Valley**—*Friends Academy.*
**Long Island City**—Bryant High School.
**Lowville**—Union School.
**Luzerne**—Hadley Luzerne High School.
**Lynbrook**—High School.
**Lyndonville**—High School.

- Lyons—High School.
- Lyons Falls—High School.
- Macedon—High School.
- McGraw—McGrawville High School
- Machias—High School.
- Madrid—High School.
- Malone—
  - Franklin Academy.
  - *St. Joseph's Academy of Malone.*
- Mamaroneck—
  - High School.
  - Rye Neck High School.
- Manchester—High School.
- Manlius—
  - High School.
  - *St. John's Military School.*
- Marathon—High School.
- Marcellus—High School.
- Margaretville—High School.
- Marion—High School.
- Massena—High School.
- Matteawan—High School.
- Mayville—High School.
- Mechanicsville—High School.
- Medina—High School.
- Mexico—Academy and High School.
- Middleburg—High School.
- Middleport—High School.
- Middletown—High School.
- Middleville—High School.
- Milford—High School.
- Millbrook—Memorial School.
- Millerton—High School.
- Mineville—High School.
- Mohawk—High School.
- Moira—High School.
- Monroe—
  - High School.
  - *The Mackenzie School.*
- Montgomery—High School.
- Monticello—High School.
- Montour Falls—*Cook Academy.*
- Mooers—High School.
- Moravia—High School.
- Moriah—*Sherman Collegiate Institute.*
- Morris—High School.
- Morrisville—High School.
- Mount Hope—*St. Clare's School.*
- Mount Kisco—High School.
- Mount Morris—High School.
- Mount Vernon—High School.
- Naples—High School.
- Newark—High School.
- Newark Valley—High School.
- New Berlin—High School.
- New Brighton—
  - Curtis High School.
  - *Staten Island Academy.*
- Newburgh—Free Academy.
- Newfield—High School.
- New Hartford—High School.
- Newport—High School.
- New Rochelle—
  - High School.
  - *Ursuline Seminary.*
- New Woodstock—High School.
- New York—
  - *Academy of Mount St. Ursula.*
  - *All Hallows Institute.*
  - *All Saints Academy.*
  - *Barnard School for Boys.*
  - *Barnard School for Girls.*
  - *Berkeley School.*
  - *Cathedral High School.*
  - *Charlton School.*
  - *College of the City of New York, Academic Department.*
  - *College of Mount St. Vincent, Academic Department.*
  - *Columbia Grammar School.*
  - De Witt Clinton High School.
  - *De La Salle Institute.*
  - *Dominican Academy.*
  - *Ethical Culture School.*
  - *Female Academy of Sacred Heart.*
  - *Hamilton Institute for Boys.*
  - *Hamilton Institute for Girls.*
  - High School of Commerce.
  - *Holy Cross Academy of Manhattan.*
  - *Horace Mann School (Teachers College).*
  - Jamaica High School.
  - Julia Richman High School.
  - *La Salle Academy.*
  - *Manhattan College, Academic Department.*
  - Morris High School.
  - *New York Collegiate Institute.*
  - Normal College of the City of New York, High School Department.
  - *Regis High School.*
  - *St. Ann's Academy.*
  - *St. Catharine's Academic School of New York.*
  - *St. Gabriel's Academy of Manhattan.*
  - *St. Lawrence Academy of Manhattan.*
  - *St. Walburga's Academy.*
  - *Scudder School for Girls.*
  - Stuyvesant High School.
  - *Trinity School.*
  - *Ursuline Academy.*
  - Wadleigh High School.
  - Washington Irving High School.
  - *Xavier High School, College of St. Francis Xavier.*
- Niagara Falls—
  - *De Veaux School.*
  - High School.
- Niagara University—*Niagara University, Academic Department.*
- Nichols—High School.
- Norfolk—High School.
- North Chili—*A. M. Chesbrough Seminary.*
- North Cohocton—North Cohocton and Atlanta Union High School.
- North Collins—High School.
- Northcreek—High School.
- Northport—High School.
- North Tarrytown—High School.
- North Tonawanda—High School.
- Northville—High School.
- Norwich—High School.
- Norwood—High School.
- Nunda—High School.

Nyack—
    High School.
    *Wilson Memorial Academy.*
Oakfield—High School.
Ocean Side—High School.
Ogdensburg—*St. Mary's Academy.*
Olean—High School.
Oneida—High School.
Oneonta—High School.
Onondaga Valley—Onondaga Free Academy.
Ontario—High School.
Orchard Park—High School.
Oriskany Falls—High School.
Ossining—
    High School.
    *Mount Pleasant Academy.*
Oswego—
    High School.
    *St. Paul's Academy.*
Otego—High School.
Ovid—High School.
Owego—Free Academy.
Oxford—Academy and Union School.
Oyster Bay—High School.
Painted Post—High School.
Palmyra—Classical High School.
Parish—High School.
Parkers—High School.
Patchogue—High School.
Pawling—
    High School.
    *Pawling School.*
Pearl River—High School.
Peekskill—
    Drum Hill High School.
    *Military Academy.*
    Oakside High School.
    *Westchester Military Academy.*
Penn Yan—Academy.
Perry—High School.
Phelps—Union and Classical School.
Philadelphia—High School.
Phoenix—High School.
Piermont—Tappan Zee High School.
Pike—Seminary High School.
Pine Plains—Seymour Smith Academy.
Pittsford—High School.
Plattsburg—
    *D' Youville Academy.*
    High School.
Pleasantville—High School.
Poland—High School.
Port Byron—High School.
Port Chester—High School.
Port Henry—
    *Champlain Academy.*
    High School.
Port Jefferson—High School.
Port Jervis—High School.
Port Leyden—High School.
Portville—High School.
Port Washington—High School.
Potsdam—High School.
Poughkeepsie—High School.
Prattsburg—Franklin Academy and Prattsburg High School.
Pulaski—Academy and Union School.
Randolph—
    *Chamberlain Military Institute.*
    High School.
Ravena—High School.
Red Creek—High School.
Red Hook—High School.
Remsen—High School.
Rensselaer—
    High School.
    *St. John's Academy.*
Rhinebeck—High School.
Richfield Springs—High School.
Richmond Hill—High School.
Richmondville—High School.
Ripley—High School.
Riverhead—High School.
Rochester—
    *Female Academy of Sacred Heart.*
    High School, East.
    High School, West.
    *Nazareth Academy.*
    *Rochester Catholic High School.*
    *Wagner Memorial Lutheran College.*
Rockville Center—South Side High School.
Rome—
    *Academy of the Holy Names.*
    Rome Free Academy.
    *St. Aloysius Academy.*
Roscoe—High School.
Roslyn—High School.
Round Lake—*Summer Institute.*
Rouses Point—High School.
Roxbury—High School.
Rushford—High School.
Rushville—High School.
Russell—Knox Memorial High School.
Rye—
    High School.
    *Seminary.*
Sacket Harbor—Sacket High School.
Sag Harbor—Pierson High School.
St. Johnsville—High School.
St. Lawrence—Evander Childs High School.
St. Regis Falls—High School.
Salamanca—High School.
Salem—Washington Academy.
Sandy Creek—High School.
Saranac Lake—High School.
Saratoga Springs—
    High School.
    *St. Faith's Academy.*
Saugerties—High School.
Savannah—High School.
Savona—High School.
Sayville—High School.
Schaghticoke—High School.
Schenectady—
    High School.
    *St. Joseph's Academy.*
Schenevus—High School.
Schoharie—High School.
Schuylerville—High School.
Scio—High School.
Scotia—High School.
Scottsville—High School.

Sea Cliff—High School.
Seneca Falls—Mynderse Academy.
Sharon Springs—High School.
Shelter Island—High School.
Sherburne—High School.
Sherman—High School.
Shortsville—High School.
Sidney—High School.
Silver Creek—High School.
Silver Springs—High School.
Sinclairville—High School.
Skaneateles—High School.
Sodus—High School.
Solvay—High School.
South Dayton—Union School.
South Glens Falls—High School.
South Otselic—High School.
Southampton—High School.
Southold—High School.
Spencer—High School.
Spencerport—High School.
Spring Valley—High School.
Springville—Griffith Institute and Union School.
Stamford—Seminary and Union School.
Stillwater—High School.
Stony Point—High School.
Suffern—High School.
Syracuse—
  *Academy of Sacred Heart.*
  Central High School.
  *Christian Brothers Academy.*
  *Goodyear-Burlingame School.*
  North High School.
  *St. John's Catholic Academy.*
  *St. Lucy's Academy.*
  Technical High School.
  *Travis Preparatory School.*
Tannersville—High School.
Tarrytown—
  *Hackley School.*
  *The Knox School.*
  Washington Irving High School.
Theresa—High School.
Ticonderoga—High School.
Tompkinsville—*Augustinian Academy.*
Tonawanda—High School.
Troy—
  *Emma Willard School.*
  High School.
  Lansingburg High School.
  *La Salle Institute.*
  *St. Joseph's Academy.*
  *St. Patrick's Academy of Troy.*
  *St. Peter's Academy.*
  *Troy Academy.*
Trumansburg—High School.
Tuckahoe—Waverly High School.
Tully—High School.
Tupper Lake—High School.
Tuxedo Park—Tuxedo High School.
Unadilla—High School.
Union—Union-Endicott High School.
Union Springs—
  High School.
  *Oakwood Seminary.*
Utica—
  *Catholic Academy.*
  *Female Academy.*
  Free Academy.
Valatie—High School.
Valley Falls—High School.
Vernon—High School.
Verona—High School.
Victor—High School.
Waddington—High School.
Walden—High School.
Wallkill—High School.
Walton—High School.
Walworth—High School.
Warner—High School.
Warrensburg—High School.
Warsaw—High School.
Warwick—Institute.
Waterford—High School.
Waterloo—High School.
Watertown—
  High School.
  *Immaculate Heart Academy.*
Waterville—High School.
Watervliet—
  *Academy.*
  High School.
  *St. Patrick's Academy.*
Watkins—High School.
Waverly—High School.
Wayland—High School.
Webster—High School.
Weedsport—High School.
Wells—High School.
Wellsville—High School.
Westchester—
  *Clason Point Military Academy.*
  *Westchester Military Academy.*
West Hampton Beach—High School.
West Winfield—High School.
Westfield—Academy and Union School.
West New Brighton—*Westerleigh Collegiate Institute.*
Westport—High School.
White Plains—High School.
Whitehall—High School.
Whitesboro—High School.
Whitney Point—High School.
Williamson—High School.
Williamsville—High School.
Willsboro—High School.
Wilson—High School.
Windham—High School.
Windsor—High School.
Woodhull—High School.
Wolcott—Leavenworth Institute and Wolcott High School.
Worcester—High School.
Wyoming—Middlebury Academy and Union School.
Yonkers—
  High School.
  *Philipse Manor School.*
  *The Halstead School.*

## NORTH CAROLINA.

Schools accredited by the University of North Carolina, December, 1914.

| | Units. |
|---|---|
| Admission requirements | 14.0 |
| Prescribed units: | |
| English | 3.0 |
| Mathematics | 3.0 |
| History | 2.0 |
| Greek | 2.0 |
| Latin | 3.7 |
| Elective | 0.3 |
| Or, instead of 3 last-named: | |
| Latin | 3.7 |
| French or German | 2.0 |
| Elective | 0.3 |
| Or these: | |
| French | 2.0 |
| German | 2.0 |
| Science | 1.0 |
| Elective | 1.0 |

Asheville—
  *Asheville School.*
  *Bingham School.*
  City High School.
  *Normal and Collegiate Institute.*
  *St. Genevieve's Academy.*
Chapel Hill—High School.
Charlotte—
  City High School.
  *Horner Military School.*
Durham—
  City High School.
  *Trinity Park School.*
Elizabeth City—City High School.
Flat Rock—*Fleet School.*
Goldsboro—City High School.
Greensboro—City High School.
Henderson—City High School.
Hendersonville—*Fassifern School.*
Laurinburg—High School.
Mars Hill—*College.*
Marion—High School.
Oak Ridge—*Institute.*
Raleigh—City High School.
Rutherfordton—*Westminster School.*
Tarboro—High School.
Warrenton—High School.
Whitsett—*Institute.*
Wilmington—City High School.
Wilson—High School.
Winston-Salem—City High School.

## NORTH DAKOTA.

"First class" schools approved by the State board of education and accredited by the University of North Dakota, August, 1914.

| | Units. |
|---|---|
| Admission requirements | 15 |
| Prescribed units: | |
| English | 3 |
| Mathematics | 2 |
| History | 1 |
| Science | 1 |
| Foreign language | 2 |
| Elective | 6 |

Beach—Agricultural High School.
Bismarck—High School.
Bottineau—High School.
Cando—High School.
Carrington—Agricultural High School.
Casselton—High School.
Cavalier—High School.
Cooperstown—High School.
Devils Lake—High School.
Dickinson—High School.
Drayton—High School.
Edgeley—High School.
Enderlin—High School.
Fargo—High School.
Grafton—Agricultural High School.
Grand Forks—High School.
Hankinson—High School.
Harvey—High School.
Hillsboro—High School.
Hope—High School.
Hunter—High School.
Jamestown—
  *College Academy.*
  High School.
  *St. John's Academy.*
Kenmare—High School.
Lakota—High School.
La Moure—Agricultural High School.
Langdon—High School.
Larimore—High School.
Lidgerwood—High School.
Lisbon—High School.
Mandan—High School.
Mayville—High School.
Michigan—High School.
Minot—High School.
Minto—High School.
New Rockford—
  *Collegiate Institute.*
  High School.

Oakes—High School.
Park River—High School.
Pembina—High School.
Portland—*Bruflat Academy.*
Rolla—High School.
Rugby—High School.
St. Thomas—High School.
Valley City—High School.
Velva—Agricultural High School.
Wahpeton—High School.
Williston—High School.

## OHIO.

Schools accredited by Ohio State University, January, 1914.

| | Units. |
|---|---|
| Admission requirements | 15 |
| Prescribed units: | |
| English | 2 |
| Mathematics | 2 |
| History | 1 |
| Foreign language | 2 |
| Science | 1 |
| Electives | 7 |

Ada—
  High School.
  *Ohio Northern University, Preparatory Department.*
Akron—
  *Buchtel Academy.*
  High School.
  South High School.
Alliance—High School.
Alpha—Beavercreek Township High School.
Amherst—High School.
Antioch—*Academy.*
Ashtabula—High School.
Ashtabula Harbor—High School.
Athens—High School.
Austinburg—*Grand River Institute.*
Barberton—High School.
Barnesville—High School.
Bellaire—High School.
Bellefontaine—High School.
Bellevue—High School.
Berea—
  *Baldwin-Wallace College Academy.*
  High School.
Bluffton—
  *College Academy.*
  High School.
Bowling Green—High School.
Brookville—High School.
Bryan—High School.
Bucyrus—High School.
Cadiz—High School.
Cambridge—High School.
Canal Dover—High School.
Canton—High School.
Carthage—High School.
Celina—High School.
Chardon—High School.
Chicago—High School.
Chillicothe—High School.
Cincinnati—
  Clifton High School.
  *Franklin School.*
  Hartwell High School.
  Hughes High School.
  Madisonville High School.
  St. Bernard High School.
  *University School.*
  Walnut Hills High School.
  Woodward High School.
Circleville—High School.
Cleveland—
  Central High School.
  Collinwood High School.
  East High School.
  Glenville High School.
  Lincoln High School.
  South High School.
  Technical High School.
  *University School.*
  West High School.
Clyde—High School.
College Hill—
  High School.
  *Ohio Military Institute.*
Columbus—
  Clinton High School.
  East High School.
  High School of Commerce.
  North High School.
  *School for Girls.*
  South High School.
  *St. Mary's of the Springs.*
  West High School.
Columbus Grove—High School.
Conneaut—High School.
Coshocton—High School.
Covington—High School.
Cuyahoga Falls—High School.
Danville—Buckeye Township High School.
Dayton—
  Steele High School.
  Stiver's Manual Training High School.
  *St. Mary's Institute.*
Defiance—High School.
Delaware—High School.
Delphos—High School.
Delta—High School.
Dennison—High School.
East Cleveland—High School.
East Liverpool—High School.
Eaton—High School.
Elyria—High School.
Fairmount—Cleveland Heights High School.
Fayette—High School.
Findlay—High School.
Fostoria—High School.
Fredericktown—High School.
Fremont—High School.
Galion—High School.

Gallipolis—High School.
Geneva—High School.
Georgetown—High School.
Germantown—High School.
Girard—High School.
Granville—*Doane Academy.*
Greenfield—High School.
Greenville—High School.
Hamilton—High School.
Hicksville—High School.
Hillsboro—High School.
Ironton—High School.
Jackson—High School.
Jefferson—High School.
Kent—High School.
Kenton—High School.
Lakewood—High School.
Lancaster—High School.
Lebanon—High School.
Leetonia—High School.
Leipsic—High School.
Lima—High School.
Lisbon—High School.
Lockland—High School.
Logan—High School.
London—High School.
Lorain—High School.
Mansfield—High School.
Marietta—High School.
Marion—
  High School.
  *St. Mary's School.*
Martins Ferry—High School.
Marysville—High School.
Massillon—High School.
Mechanicsburg—High School.
Medina—High School.
Miamisburg—High School.
Middletown—High School.
Milford—High School.
Millersburg—High School.
Mingo Junction—High School.
Montpelier—High School.
Mount Gilead—High School.
Mount Vernon—High School.
Napoleon—High School.
Nelsonville—High School.
Newark—High School.
New Bremen—High School.
Newcomerstown—High School.
New Concord—High School.
New London—High School.
New Philadelphia—High School.
Niles—High School.
North Baltimore—High School.
Norwalk—High School.
Norwood—High School.
Nottingham—High School.
Oak Harbor—High School.
Oberlin—
  *Academy.*
  High School.
Orrville—High School.
Ottawa—High School.
Oxford—
  High School.
  McGuffey High School.
  *Oxford College Academy.*
Painesville—High School.
Piqua—High School.
Plain City—High School.
Pleasant Ridge—High School.
Port Clinton—High School.
Portsmouth—High School.
Ravenna—High School.
St. Clairsville—High School.
St. Martin—*Ursuline Academy.*
St. Marys—High School.
Salem—High School.
Sandusky—High School.
Scio—*Academy High School.*
Shelby—High School.
Sidney—High School.
South Charleston—High School.
Springfield—
  High School.
  *St. Raphael's School.*
Steubenville—High School.
Tiffin—
  *Heidelberg Academy.*
  High School.
Tippecanoe City—High School.
Toledo—
  High School.
  *Smead School.*
Troy—High School.
Urichsville—High School.
Upper Sandusky—High School.
Urbana—
  High School.
  *University School.*
Van Wert—High School.
Wadsworth—High School.
Wapakoneta—High School.
Warren—High School.
Washington Court House—High School.
Wauseon—High School.
Waverly—High School.
Wellington—High School.
Wellston—High School.
Wellsville—High School.
Westerville—High School.
Willoughby—High School.
Wilmington—High School.
Wooster—
  *Academy.*
  High School.
Worthington—High School.
Wyoming—High School.
Xenia—High School.
Youngstown—
  Rayen High School.
  South High School.
Zanesville—High School.

## OKLAHOMA.

**Schools approved by the State Board of Education and fully affiliated with the University of Oklahoma, May, 1914.**

| | Units. |
|---|---|
| Admission requirements | 15 |
| Prescribed units: | |
| English | 3 |
| Mathematics | 2 |
| History | 1 |
| Science | 1 |
| Foreign language | 1 |
| Electives | 6 |

- Altus—High School.
- Anadarko—High School.
- Arapaho—High School.
- Ardmore—High School.
- Atoka—High School.
- Bartlesville—High School.
- Beaver—High School.
- Blackwell—High School.
- Carmen—High School.
- Chandler—High School.
- Checotah—High School.
- Chelsea—High School.
- Cherokee—High School.
- Chickasha—High School.
- Claremore—University Preparatory School.
- Cleveland—High School.
- Clinton—High School.
- Coalgate—High School.
- Collinsville—High School.
- Copan—High School.
- Cordell—
  - *Cordell Christian College.*
  - High School.
- Cushing—High School.
- Custer City—High School.
- Dewey—High School.
- Duncan—High School.
- Elk City—High School.
- El Reno—High School.
- Enid—
  - High School.
  - *Phillips University High School.*
- Eufaula—High School.
- Fairfax—High School.
- Fairview—High School.
- Frederick—High School.
- Geary—High School.
- Granite—High School.
- Guthrie—
  - High School.
  - *Methodist University, Academy.*
- Guymon—High School.
- Hennessey—High School.
- Henryetta—High School.
- Hobart—High School.
- Holdenville—High School.
- Hollis—High School.
- Hugo—High School.
- Kingfisher—
  - High School.
  - *Kingfisher College, Academy.*
- Lawton—High School.
- Lexington—High School.
- Lindsay—High School.
- Madill—High School.
- Mangum—High School.
- Marietta—High School.
- McAlester—High School.
- McLoud—High School.
- Medford—High School.
- Miami—High School.
- Mountain View—High School.
- Muldrow—High School.
- Muskogee—High School.
- Newkirk—High School.
- Norman—High School.
- Nowata—High School.
- Okemah—High School.
- Oklahoma—High School.
- Okmulgee—High School.
- Oktaha—High School.
- Pawnee—High School.
- Pauls Valley—High School.
- Perry—High School.
- Ponca City—High School.
- Pond Creek—High School.
- Porum—High School.
- Poteau—High School.
- Pryor—High School.
- Purcell—High School.
- Ramona—High School.
- Ryan—High School.
- Sallisaw—High School.
- Sapulpa—High School.
- Sayre—High School.
- Shawnee—High School.
- Snyder—High School.
- Stillwater—High School.
- Stillwell—High School.
- Stigler—High School.
- Sulphur—High School.
- Tecumseh—High School.
- Temple—High School.
- Thomas—High School.
- Tishomingo—High School.
- Tonkawa—University Preparatory School.
- Tulsa—
  - *Henry Kendall College Academy.*
  - High School.
- Vinita—High School.
- Wagoner—High School.
- Walters—High School.
- Wapanucka—High School.
- Watonga—High School.
- Waurika—High School.
- Weleetka—High School.
- Wilburton—High School.
- Woodward—High School.
- Wynnewood—High School.

## OREGON.

Accredited by the University of Oregon, April, 1914.

| | Units. |
|---|---|
| Admission requirements | 15 |
| Prescribed units: | |
| English | 3 |
| Mathematics | 2 |
| History | 1 |
| Science | 1 |
| Electives | 8 |

Airlie—High School.
Albany—High School.
Alsea—High School.
Amity—High School.
Arlington—High School.
Ashland—High School.
Astoria—High School.
Athena—High School.
Baker—
    High School.
    *St. Francis Academy.*
Balston—High School.
Bandon—High School.
Bay City—High School.
Bend—High School.
Brownsville—
    High School.
    (South)—High School.
Burns—Harney County High School.
Canby—High School.
Carlton—High School.
Central Point—High School.
Clatskanie—High School.
Coburg—High School.
Condon—Gilliam County High School.
Coquille—High School.
Corvallis—High School.
Cottage Grove—High School.
Cove—High School.
Creswell—High School.
Dallas—High School.
Dayton—High School.
Drain—High School.
Dufur—High School.
Echo—High School.
Elgin—High School.
Elmira—High School.
Enterprise—Wallowa County High School.
Estacada—High School.
Eugene—High School.
Falls City—High School.
Florence—High School.
Forest Grove—High School.
Fossil—Wheeler County High School.
Freewater—High School.
Gervais—High School.
Glendale—High School.
Gold Hill—High School.
Grants Pass—High School.
Gresham—High School.
Haines—High School.
Halfway—High School.
Halsey—High School.
Harrisburg—High School.
Heppner—High School.
Hermiston—High School.
Hillsboro—High School.
Hood River—
    Frankton High School.
    High School.
Independence—High School.
Ione—High School.
Jefferson—High School.
Joseph—High School.
Junction City—High School.
Klamath Falls—County High School.
La Grande—High School.
Lakeview—High School.
Lebanon—High School.
Lexington—High School.
Marshfield—High School.
McCoy—High School.
McMinnville—High School.
Medford—High School.
Merrill—High School.
Milton—
    *Columbia Junior College.*
    High School.
Milwaukie—High School.
Monmouth—High School.
Monroe—High School.
Monro—High School.
Mount Angel—
    *Academy.*
    *College.*
Myrtle Creek—High School.
Myrtle Point—High School.
Nehalem—Union High School.
Newberg—
    High School.
    *Pacific Academy.*
Newport—High School.
North Bend—High School.
Nyssa—High School.
Oakland—High School.
Ontario—High School.
Oregon City—High School.
Parkplace—High School.
Pendleton—
    High School.
    *St. Joseph's Academy.*
Philomath—High School.
Pleasant Hill—Union High School No. 1.
Portland—
    *Academy.*
    *Columbia University.*
    *Hill Military Academy.*
    Jefferson High School.
    Lincoln High School.
    *St. Helen's Hall.*

Portland—Continued.
  *St. Joseph's School.*
  *St. Mary's Academy.*
  Washington High School.
  *Y. M. C. A. Preparatory School.*
Prairie City—High School.
Prineville—Crook County High School.
Rainier—High School.
Redmond—High School.
Richmond—High School.
Riddle—High School.
Roseburg—High School.
Salem—High School.
Scappoose—High School.
Seaside—High School.
Sheridan—High School.
Silverton—High School.
Springfield—High School.
Stanfield—High School.
St. Helen—High School.
St. Johns—High School.
Sumpter—High School.
Sutherlin—High School.
Tangent—High School.
Thurston—High School.
Tillamook—High School.
The Dalles—High School.
Toledo—High School.
Union—High School.
Vale—High School.
Waterville—Union High School.
Wasco—High School.
Weston—High School.
Willamina—High School.
Woodburn—High School.
Yoncalla—High School.

## PENNSYLVANIA.

Public high schools approved by the State Department of Education of Pennsylvania for the year ended July, 1913.

Requirements for approval: Four years of nine months each; at least three teachers; recitation periods 40 minutes in length; double periods in laboratory work; a minimum of twenty 40-minute recitations of prepared work; adequate equipment for teaching science studies; a reference library covering all the subjects offered.

English required in each year; at least one unit of science; two units of mathematics; one unit of history; two units of foreign language.

Graduates of these schools may be admitted to the University of Pennsylvania upon their records. (See extract from letter of Dean A. H. Quinn under private schools accredited by the University of Pennsylvania.)

Allentown—High School.
Altoona—High School.
Ambridge—High School.
Annville—High School (Township).
Ardmore—Lower Merion Township High School.
Aspinwall—High School.
Athens—High School.
Avalon—High School.
Bangor—High School.
Beaver—High School.
Beaver Falls—High School.
Bedford—High School.
Bellevue—High School.
Bellefonte—High School.
Ben Avon—High School.
Benton—High School.
Berwick—High School.
Berwyn—Easttown-Tredyffrin Township High School.
Bethlehem—High School.
Birdsboro—High School.
Blairsville—High School.
Bloomsburg—
  High School.
  Mount Pleasant Township High School.
Blossburg—High School.
Boyertown—High School.
Braddock—High School.
Bradford—High School.
Bristol—High School.
Brookville—High School.
Burgettstown—High School.
Butler—High School.
Cambridge Springs—High School.
Canonsburg—High School.
Canton—High School.
Carbondale—High School.
Carlisle—High School.
Chambersburg—High School.
Charleroi—High School.
Chester—High School.
Clearfield—High School.
Coatesville—High School.
Cochranton—High School.
Coraopolis—High School.
Connellsville—High School.
Columbia—High School.
Corry—High School.
Coudersport—High School.
Crafton—High School.
Damascus—High School.
Danville—High School.
Darby—High School.
Derry—High School.
Downingtown—High School.
Doylestown—High School.
Du Bois—High School.
Dunmore—High School.
Duryea—High School.
Easton—High School.
East Stroudsburg—High School.
Elkins Park—Cheltenham High School.
Emporium—High School.
Ephrata—High School.
Erie—High School.
Everett—High School.
Farrell—High School.
Ford City—High School.
Franklin—High School.
Freedom—High School.

Freeland—High School.
Freeport—High School.
Galeton—High School.
Gettysburg—High School.
Girard—High School.
Greensburg—High School.
Greenville—High School.
Grove City—High School.
Hanover—High School.
Harrisburg—
  High School.
  Technical High School.
Hawley—High School.
Hazleton—
  Hazle Township High School.
  High School.
Hollidaysburg—High School.
Homestead—High School.
Honesdale—High School.
Huntingdon—High School.
Irwin—High School.
Jeannette—High School.
Jenkintown—High School.
Jersey Shore—High School.
Johnsonburg—High School.
Johnstown—High School.
Juniata—High School.
Kane—High School.
Kennett Square—High School.
Kingston—
  High School.
  Dorranceton High School.
  Forty Fort High School.
Kittanning—High School.
Knoxville—High School.
Lancaster—
  Boys' High School.
  Girls' High School.
Lansdale—High School.
Lansdowne—High School.
Lansford—High School.
Larksville—High School.
Latrobe—High School.
Lebanon—High School.
Leechburg—High School.
Lemont Furnace—North Union Township High School.
Lewisburg—High School.
Lewistown—High School.
Lititz—High School.
Llanerch—Haverford Township High School.
Lock Haven—High School.
Lykens—High School.
McDonald—High School.
McKeesport—High School.
Mahanoy City—High School.
Manheim—High School.
Mansfield—High School.
Marienville—Jenks Township High School.
Mauch Chunk—High School.
Meadville—High School.
Mechanicsburg—High School.
Media—High School.
Mercer—High School.
Meyersdale—High School.
Middletown—High School.
Mifflintown—High School.
Millersburg—High School.
Milton—High School.
Minersville—High School.
Mount Carmel—High School.
Mount Jewett—High School.
Mount Oliver—Knoxville High School.
Mount Pleasant—High School.
Mount Union—High School.
Monessen—High School.
Monongahela—High School.
Montrose—High School.
Muncy—High School.
Munhall—High School.
Nanticoke—High School.
Narberth—High School.
Nazareth—High School.
Nesquehoning—Mauch Chunk Township High School.
New Brighton—High School.
New Castle—High School.
New Kensington—High School.
Newport—High School.
Norristown—High School.
Northampton—High School.
North East—High School.
North Girard—Girard Township High School.
Northumberland—High School.
Oakmont—High School.
Oil City—High School.
Oxford—High School.
Parkesburg—High School.
Parnassus—High School.
Pen Argyl—High School.
Philadelphia—
  Central High School.
  Girls' High School.
  Northeast Manual High School.
  Southern Manual High School.
  West Philadelphia (Boys) High School.
  West Philadelphia High School.
  William Penn High School.
Phillipsburg—High School.
Phoenixville—High School.
Pittsburgh—
  Allegheny High School.
  Fifth Avenue High School.
  High School.
  Peabody High School.
  Pittsburgh Central High School.
  South High School.
Pittston—
  High School.
  West Pittston High School.
Port Allegany—High School.
Pottstown—High School.
Pottsville—High School.
Punxsutawney—High School.
Reading—
  Boys' High School.
  Girls' High School.
Red Lion—High School.
Reedsville—Brown Township High School.
Renovo—High School.
Ridgway—High School.
Ridley Park—High School.
Rochester—High School.
Royersford—High School.

St. Marys—High School.
Sayre—High School.
Scottdale—High School.
Scranton—
  High School.
  Technical High School.
Sewickley—High School.
Sharon—High School.
Sheffield—High School.
Shenandoah—High School.
Shamokin—High School.
Shippensburg—High School.
Slatington—High School.
Smethport—High School.
South Bethlehem—High School.
Somerset—High School.
Spring City—High School.
State College—High School.
Steelton—High School.
Stroudsburg—High School.
Sunbury—High School.
Susquehanna—High School.
Swarthmore—High School.
Swissvale—
  High School.
  Park High School.
Tamaqua—High School.
Tarentum—High School.
Tidioute—High School.
Titusville—High School.
Towanda—High School.
Troy—High School.
Tunkhannock—High School.
Tyrone—High School.
Union City—High School.
Uniontown—High School.
Vandergrift—High School.
Wanamie—Newport Township High School.
Warren—High School.
Washington—
  East Washington High School.
  High School.
Waterford—High School (Joint).
Wayne—Radnor High School (Township).
Waynesboro—High School.
Waynesburg—High School.
Wellsboro—High School.
West Chester—High School.
Westfield—High School.
Wilkes-Barre—High School.
Wilkinsburg—High School.
Williamsport—
  High School.
  South Williamsport High School.
Williamstown—High School.
Windber—High School.
Woodlawn—High School.
Yeagertown—Derry Township High School.
York—High School.
Youngsville—High School.
Zelienople—High School.

Private or secondary schools in Pennsylvania whose work is accepted by the University of Pennsylvania
(May 23, 1914.)

"The placing of a school on this accredited list does not mean that we certify to the standing of the school in al subjects. Each application for admission upon school record is acted upon individually, and a student may be admitted without examination in certain subjects and may take entrance examinations in other subjects in which his grades have not been sufficiently high to warrant his exemption from examination." (Letter from Dean A. H. Quinn, May 23, 1914.)

| | Units. |
|---|---|
| Admission requirement | 14½ |
| Prescribed units: | |
| English | 3 |
| Mathematics | 2½ |
| History | 1 |
| Two foreign languages | [1] 4—7 |
| Electives | 4—1 |

Alleghany—*Alleghany Preparatory School.*
Allentown—*Allentown Preparatory School.*
Annville—*Lebanon Valley Academy.*
Bryn Athyn—*Academy of the New Church.*
Carlisle—*Conway Hall.*
Bellefonte—*Bellefonte Academy.*
Bethlehem—
  *Bethlehem Preparatory School.*
  *Moravian Parochial School.*
Chester—*Pennsylvania Military College.*
Easton—*Easton Academy.*
Factoryville—*Keystone Academy.*
Freeland—*Mining and Mechanics Institute.*
George School—*George School.*
Gettysburg—*Gettysburg Academy (Stevens Hall).*
Greensburg—*Greensburg Seminary.*
Harrisburg—*Harrisburg Academy.*
Jenkintown—*Abington Friends' School.*
Kennett Square—*Cedarcroft School.*
Kingston—*Wyoming Seminary.*
Lancaster—
  *Franklin and Marshall Academy.*
  *Yeates School.*
Lansford—*Lansford School.*
Lewisburg—*Bucknell Academy, Bucknell University.*
Lewistown—*Lewistown Preparatory School.*
Mercersburg—*Mercersburg Academy.*
Mount Pleasant—*Western Pennsylvania Classical and Scientific Institute.*
Myerstown—*Albright Preparatory School.*
New Bloomfield—*New Bloomfield Academy.*
Pennsburg—*Perkiomen Seminary.*
Philadelphia—
  *Brown Preparatory School.*
  *Chestnut Hill Academy.*
  *De Lancey School.*
  *Episcopal Academy.*

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[1] If Latin is offered, 4 units must be presented; if Greek, 3 units.

Philadelphia—Continued.
    *Friends' Central School.*
    *Friends' Select School.*
    *Germantown Academy.*
    *Germantown Friends' School.*
    *La Salle College.*
    *John F. Maher Preparatory School.*
    *St. Joseph's College High School.*
    *Temple University Preparatory School.*
    *William Penn Charter School.*
    *Phillips Brooks School.*
Pittsburgh—
    *Duquesne University High School.*
    *East Liberty Academy.*
    *Shady Side Academy.*
Pottstown—*The Hill School.*
Reading—*Schuylkill Seminary.*
Saltsburg—*Kiskiminetas Springs School.*
Scranton—
    *Lackawanna School.*
    *St. Thomas Aquinas College.*
Swarthmore—*Swarthmore Preparatory School.*
Villa Nova—*Villa Nova Preparatory.*
Wayne—*St. Luke's School.*
West Chester—
    *Friends' Graded School.*
    *Villa Maria.*
Westtown—*Westtown Boarding School.*
Wilkes-Barre—*Harry Hillman Academy.*
Williamsport—*Williamsport Dickinson Seminary.*
York—*York County Academy.*

## RHODE ISLAND.

Approved by the Rhode Island State Board of Education, June, 1914.

For approval, schools must maintain at least 38 weeks in each school year; must employ three or more teachers; must have a course of study covering a minimum of 14½ units, and must have adequate laboratory and library equipment.

Ashaway—Hopkinton High School.
Barrington Center—Barrington High School.
Block Island—High School.
Bristol—High School.
Central Falls—High School.
East Providence—High School.
Hope Valley—High School.
Newport—Rogers High School.
Pascoag—Burrillville High School.
Pawtucket—High School.
Providence—
    Classical High School.
Providence—Continued.
    Cranston High School.
    English High School.
    Hope Street High School.
    Technical High School.
River Point—Warwick High School.
Valley Falls—Cumberland High School.
Wakefield—South Kingston High School.
Warren—High School.
Westerly—High School.
Wickford—North Kingston High School.
Woonsocket—High School.

## SOUTH CAROLINA.

Schools accredited by the University of South Carolina, November, 1914.

Admission to regular freshman standing at the university is on 10 high-school units, and the university maintains a list of "approved" schools giving acceptably that amount of work. The "accredited" schools listed below, however, are schools giving acceptably 14 units, and their graduates are admitted to advanced standing at the university.

Anderson—High School.
Bamberg—High School.
Batesburg—High School.
Bennettsville—High School.
Blacksburg—High School.
Central—High School.
Charleston—
    High School.
    Memminger High School.
    *Porter Military Academy.*
Clio—High School.
Darlington—High School.
Denmark—High School.
Dillon—High School.
Fairforest—High School.
Florence—High School.
Greenwood—
    *Bailey Military Institute.*
    High School.
Honea Path—High School.
Johnston—High School.
Latta—High School.
Leesville—High School.
Marion—High School.
Mullins—High School.
Ninety Six—High School.
North Augusta—High School.
Spartanburg—
    Hastoc High School.
    *Wofford Fitting School.*
St. Matthews—High School.
Summerville—High School.
Sumter—High School.
Winnsboro—High School.
Woodruff—High School.

## SOUTH DAKOTA.

No list of approved or accredited high schools is published by the State education department or by the State University of South Dakota. A list of South Dakota schools accredited by the North Central Association of Colleges and Secondary Schools is given on page 92.

## TENNESSEE.

Schools "fully accredited" by the University of Tennessee, May, 1914.

| | Units. |
|---|---|
| Admission requirements | 14 |
| Prescribed units: | |
| English | 3 |
| Mathematics | 2½ |
| Foreign language | 4 |
| Electives | 4½ |

Ashland City—Cheatham County High School.
Athens—McMinn County High School.
Bell Buckle—*Webb School.*
Bolivar—High School.
Brownsville—Haywood County High School.
Brunswick—*Bolton College.*
Cedar Hill—Cedar Hill Institute.
Chattanooga—
  Central High School.
  City High School.
  *Girls' Preparatory School.*
  *The McCallie School.*
  *University School.*
Chucky—*Wesleyan Academy.*
Clarksville—Montgomery County High School.
Columbia—
  *Columbia Institute.*
  Maury County High School.
  *Military Academy.*
Concord—Farragut High School.
Covington—Byars-Hall High School.
Cumberland Gap—*Lincoln Memorial University.*
Dayton—High School.
Dyer—*West Tennessee College.*
Dyersburg—High School.
Fayetteville—
  Lincoln County High School.
  *Morgan School.*
Fountain City—Knox County High School.
Franklin—
  High School.
  *Peoples School.*
Gallatin—*Hawkins School.*
Grandview—*Grandview Institute.*
Greenfield—*Training School.*
Hixson—Hamilton County High School.
Humboldt—High School.
Huntingdon—Industrial and Training School.
Jackson—City High School.
Jasper—Marion County High School.
Johnson City—Washington County High School.
Kimberlin Heights—*Johnson Academy.*
Knoxville—City High School.
Lawrenceburg—Lawrence County High School.
Lebanon—*Castle Heights School.*
Lenoir City—High School.
Lewisburg—*Price-Webb School.*
Lynnville—*Robert B. Jones High School.*
McKenzie—*McTyeire School.*
Madisonville—High School.
Martin—*McFerrin Training School.*
Memphis—
  City High School.
  *Higbee School.*
  *St. Mary's School.*
  *University School.*
  Shelby County High School.
McMinnville—City High School.
Milan—High School.
Murfreesboro—High School.
Nashville—
  *Boscobel College.*
  *Bowen School.*
  *Duncan Preparatory School.*
  Hume-Fogg High School.
  *Montgomery-Bell Academy.*
  *Nashville Bible School.*
  *University School.*
  *Ward-Belmont Seminary.*
Paris—E. W. Grove High School.
Park City—High School.
Pleasant Hill—*Academy.*
Pulaski—
  High School.
  *Martin College.*
  *Massey School.*
Ripley—High School.
Sale Creek—High School.
Savannah—*Savannah Institute.*
Sewanee—*Military Academy.*
Shelbyville—
  *Brandon Training School.*
  *Dixon Academy.*
Soddy—Hamilton County High School.
Somerville—High School.
Sparta—High School.
Spencer—*Burritt College.*
Springfield—*Peoples and Tucker School.*
Spring Hill—*Branham and Hughes School.*
Sweetwater—*Tennessee Military Institute.*
Trenton—
  Peabody High School.
  *Training School.*
Tullahoma—*Fitzgerald and Clarke School.*
Tyner—Hamilton County High School.
Union City—
  City High School.
  *Training School.*

## TEXAS.

**Schools of "Group I" affiliated with the University of Texas, June 10, 1914.**

| | Units. |
|---|---|
| Admission requirements | 14 |
| Prescribed units: | |
| English | 3 |
| Mathematics | 2½ |
| History | 2 |
| Electives | 6½ |

Abilene—High School.
Alice—High School.
Amarillo—High School.
Austin—
  *Academy.*
  High School.
  *Kelley School.*
  *Kenilworth Hall.*
  *St. Mary's Academy.*
  *University Preparatory School.*
  *Whitis School.*
Ballinger—High School.
Beaumont—High School.
Beeville—High School.
Belton—High School.
Big Spring—High School.
Bonham—High School.
Bowie—High School.
Brady—High School.
Brenham—
  *Blinn Memorial College.*
  High School.
Brownwood—High School.
Bryan—
  *Allen Academy.*
  High School.
Caldwell—High School.
Calvert—High School.
Cameron—High School.
Canyon—High School.
Cisco—
  *Britton's Training School.*
  High School.
Clarksville—High School.
Cleburne—High School.
Coleman—High School.
Colorado—High School.
Comanche—High School.
Corsicana—High School.
Corpus Christi—High School.
Crockett—High School.
Cuero—John C. French High School.
Dalhart—High School.
Dallas—
  *The Hardin School for Boys*
  High School.
  Oak Cliff High School.
  *The Terrill School.*
Del Rio—High School.
Denison—High School.
Denton—High School.
Dublin—High School.
El Paso—High School.
Ennis—High School.
Fort Worth—
  High School.
  North Fort Worth High School.
Gainesville—High School.
Galveston—Ball High School.
Garland—High School.
Gatesville—High School.
Georgetown—High School.
Giddings—High School.
Gonzales—High School.
Graham—High School.
Greenville—High School.
Hamilton—High School.
Henderson—High School.
Hereford—High School.
Hico—High School.
Hillsboro—High School.
Honey Grove—High School.
Houston—
  High School.
  Houston Heights High School.
Hubbard—High School.
Huntsville—High School.
Itasca—High School.
Kaufman—High School.
Kerrville—High School.
Lagrange—High School.
Lampasas—High School.
Laredo—High School.
Llano—High School.
Longview—High School.
Lubbock—High School.
Lufkin—High School.
Mansfield—High School.
Marlin—High School.
Marshall—High School.
Mart—High School.
McGregor—High School.
McKinney—High School.
Meridian—*College.*
Mexia—High School.
Midland—High School.
Mineral Wells—High School.
Mineola—High School.
Nacogdoches—High School.
Navasota—High School.
Orange—High School.
Palestine—High School.
Paris—High School.
Pittsburg—High School.
Plainview—High School.
Port Arthur—High School.
Quanah—High School.
Rockdale—High School.
San Angelo—High School.
San Antonio—
  *Academy of Our Lady of the Lake.*
  High School.
  *Marshall Training School.*
  *San Antonio Academy.*
  *West Texas Military Academy.*
San Benito—High School.

San Marcos—
  *Baptist Academy.*
  *Coronal Institute.*
  High School.
Seguin—High School.
Sherman—High School.
Smithville—High School.
Stamford—High School.
Sulphur Springs—High School.
Sweetwater—High School.
Taylor—High School.
Temple—High School.
Terrell—High School.
Texarkana—High School.
Tyler—High School.
Uvalde—High School.
Victoria—High School.
Waco—High School.
Waxahachie—High School.
Weatherford—High School.
Wichita Falls—High School.
Winnsboro—High School.
Yoakum—High School.

Public high schools, in addition to those of "Group I" affiliated with the University of Texas, listed as "Class I" by the State Department of Education, September, 1913.

Schools of Class I must have not fewer than three teachers; a school term of at least eight scholastic months; a course of study in which 17½ units are required for graduation (a unit being defined as five recitations per week in a subject, each recitation being 35 to 40 minutes in length, and the subject being pursued for at least 36 weeks); laboratory apparatus sufficient to offer at least 2½ units in high-school sciences.

Alvarado—High School.
Alvin—High School.
Angleton—High School.
Anson—High School.
Arlington—High School.
Atlanta—High School.
Baird—High School.
Bartlett—High School.
Bastrop—High School.
Bay City—High School.
Belleville—High School.
Bracketville—High School.
Bridgeport—High School.
Brownsville—High School.
Burnet—High School...
Carthage—High School.
Celeste—High School.
Center—High School.
Childress—High School.
Clarendon—High School.
Columbus—High School..
Commerce—High School.
Conroe—High School.
Cooper—High School.
Cotulla—High School.
Decatur—High School.
De Leon—High School.
Devine—High School.
Eagle Lake—High School.
Eagle Pass—High School.
Edna—High School.
El Campo—High School.
Elgin—High School.
Falfurrias—High School.
Farmersville—High School.
Ferris—High School.
Floresville—High School.
Floydada—High School.
Forney—High School.
Franklin—High School.
Fredericksburg—High School.
Garrison—High School.
Gilmer—High School.
Gorman—High School.
Granbury—High School.
Grand Prairie—High School.
Grandview—High School.
Granger—High School.
Grapevine—High School.
Groveton—High School.
Hallettsville—High School.
Hamlin—High School.
Handley—High School.
Haskell—High School.
Henrietta—High School.
Jacksboro—High School.
Jacksonville—High School.
Jourdanton—High School.
Kerens—High School.
Killeen—High School.
Kingsville—High School.
Kyle—High School.
Ladonia—High School.
Lancaster—High School.
Lewisville—High School.
Livingston—High School.
Lockhart—High School.
Madisonville—High School.
Marble Falls—High School.
Memphis—High School.
Merkel—High School.
Midlothian—High School.
Mount Pleasant—High School.
New Braunfels—High School.
Odessa—High School.
Ozona—High School.
Paducah—High School.
Palacios—High School.
Pearsall—High School.
Pecos—High School.
Pilot Point—High School.
Polytechnic—Polytechnic Heights High School.
Port Lavaca—High School.
Rising Sun—High School.
Rosebud—High School.
Rosenberg—High School
Royse—High School.
Runge—High School.
Sabinal—High School.
San Augustine—High School.
Sanger—High School.
San Saba—High School.
Santa Anna—High School.
Seymour—High School.

Snyder—High School.
Sour Lake—High School.
South Park—High School.
Stephenville—High School.
Teague—High School.
Tulia—High School.
Van Alystine—High School.
Vernon—High School.
West—High School.
Whitney—High School.
Wills Point—High School.
Winters—High School.
Wortham—High School.
Wylie—High School.

## UTAH.

The high schools of Utah have not been formally accredited by the University of Utah. President Kingsbury states, however, that the university accepts students from the two following high schools, "feeling assured that the work in these schools has been well done."

Ogden—High School.
Salt Lake City—High School.

Regarding the schools listed below, the president states: "The university accepts students from them with a feeling that in most instances the work is well done, but with an understanding that the students are in the university on probation."

| | Units. |
|---|---|
| Admission requirements | 15 |
| Prescribed units: | |
| English | 3 |
| Mathematics | 2 |
| History | 1 |
| Electives | 9 |

American Fork—High School.
Beaver—*Murdock Academy.*
Bountiful—High School.
Brigham—High School.
Cedar City—Branch Normal School.
Ephraim—*Snow Academy.*
Eureka—High School.
Fillmore—Millard County High School.
Heber—High School.
Lehi—High School.
Logan—*Brigham Young Collegiate High School.*
Manti—High School.
Mount Pleasant—
  High School.
  *Wasatch Academy.*
Nephi—High School.
Ogden—*Weber Academy.*
Park City—High School.
Payson—High School.
Pleasant Grove—High School.
Richfield—High School.
Salt Lake City—
  *All Hallows College.*
  Granite High School.
  *Latter Day Saints High School.*
  *Rowland Hall.*
  *Salt Lake Collegiate Institute.*
Sandy—Jordan High School.
Spanish Fork—High School.
Springville—High School.

## VERMONT.

Schools listed as "first class" by the State Board of Education of Vermont, May 25, 1914.

For a school of the first class at least two teachers are necessary and the time for recitation must be not less than 40 minutes for classes of 10 or more and not less than 30 minutes for classes of less than 10.

Bakersfield—*Brigham Academy.*
Barre—
  High School.
  *Goddard Seminary.*
Barton—High School.
Bellows Falls—High School.
Bennington—High School.
Bethel—High School.
Bradford—High School.
Brandon—High School.
Brattleboro—High School.
Bristol—High School.
Burlington—
  High School.
  *St. Mary's Academy.*
Canaan—High School.
Chelsea—High School.
Chester—High School.
Danville—High School.
Derby—*Derby Academy.*
Enosburg Falls—High School.
Essex Junction—High School.
Fairfax—Bellows Free Academy.
Fair Haven—High School.
Franklin—High School.
Hardwick—High School.
Highgate Center—High School.
Hinesburg—High School.
Hyde Park—High School.
Island Pond—High School.
Jericho Center—High School.
Johnson—High School.
Ludlow—High School.
Lyndon Center—*Lyndon Institute.*
McIndoe Falls—*McIndoes Academy.*
Manchester—*Burr and Burton Seminary.*
Middlebury—High School.
Montpelier—
  High School.
  *Montpelier Seminary.*
Morrisville—High School.
Newbury—High School.
New Haven—High School.
Newport—High School.

North Bennington—High School.
North Craftsbury—*Craftsbury Academy.*
Northfield—High School.
North Troy—High School.
Orleans—High School.
Peacham—*Caledonia County Grammar School.*
Pittsford—High School.
Poultney—*Troy Conference Academy.*
Proctor—High School.
Randolph—High School.
Richford—High School.
Richmond—High School.
Rochester—High School.
Rutland—High School.
St. Albans—High School.
St. Johnsbury—*St. Johnsbury Academy.*
Saxtons River—*Vermont Academy.*
South Royalton—High School.
Springfield—High School.
Stowe—High School.
Swanton—
  High School.
  *St. Ann's Academy.*
Thetford—*Thetford Academy.*
Townshend—*Leland and Gray Seminary.*
Vergennes—High School.
Waterbury—High School.
Wells River—High School.
West Rutland—High School.
White River Junction—High School.
Wilmington—High School.
Windsor—High School.
Winooski—
  High School.
  *St. Michael's Institute.*
Woodstock—High School.

## VIRGINIA.

Accredited by the University of Virginia for 1914-15.

| | Units. |
|---|---|
| Admission requirements | 14 |
| Prescribed units: | |
| English | 3 |
| Mathematics | 2½ |
| History | 1 |
| Latin | 4 |
| Electives | 3½ |

Abingdon—High School.
Accomac—High School.
Alexandria—
  City High School.
  *Episcopal High School.*[1]
Amelia—High School.
Appomattox—Agricultural High School.
Bedford City—
  High School.
  *Randolph-Macon Academy.*[1]
Big Stone Gap—High School.
Blacksburg—High School.
Blackstone—
  *Academy.*
  High School.
Bristol—High School.
Buchanan—High School.
Buena Vista—High School.
Burkeville—High School.
Cape Charles—High School.
Charlotte—High School.
Charlottesville—
  High School.
  *Jefferson School.*
Chase City—High School.
Chester—Agricultural High School.
Christiansburg—High School.
Churchland—High School.
Clifton Forge—High School.
Cluster Springs—*Academy.*
Covington—High School.
Crewe—High School.
Danville—
  High School.
  *The Danville School.*[1]
Dayton—*Shenandoah Collegiate Institute.*
Driver—High School.
Dublin—*Institute.*
East Stone Gap—High School.
Elk Creek—High School.
Emporia—High School.
Farmville—High School.
Fincastle—High School.
Forest Depot—*New London Academy.*
Fort Defiance—*Augusta Military Academy.*
Fork Union—*Academy.*
Franklin—High School.
Franktown—Franktown-Nassawadox High School.
Fredericksburg—High School.
Front Royal—
  High School.
  *Randolph-Macon Academy.*[1]
Galax—High School.
Gate City—Shoemaker High School.
Graham—High School.
Hampton—High School.
Harrisonburg—High School.
Highland Springs—High School.
Lawrenceville—High School.
Lebanon—High School.
Leesburg—High School.
Lexington—High School.
Lincoln—High School.
Louisa—High School.
Luray—High School.
Lynchburg—High School.
Manassas—Agricultural High School.
Martinsville—High School.
Middletown—
  High School.
  *Miller School.*
Monterey—High School.
Morrisville—High School.
Newport News—High School.

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[1] Accredited also by the Virginia Commission on Accredited Schools.

Norfolk—
  *Academy.*[1]
  Lafayette High School.
  Maury High School.
Norton—High School.
Oceana—High School.
Onancock—High School.
Orange—High School.
Palmyra—High School.
Pearisburg—High School.
Petersburg—High School.
Pocahontas—High School.
Portsmouth—
  Deep Creek High School.
  High School.
  Western Branch High School.
Pulaski—High School.
Radford—High School.
Reedville—High School.
Richlands—High School.
Richmond—
  *Academy.*
  Barton Heights High School.
  *The Chamberlayne School.*
  Highland Park High School.
  John Marshall High School.
  *McGuire's University School.*[1]
Roanoke—High School.
Rural Retreat—High School.
Salem—High School.
Scottsville—High School.
Smithfield—High School.
South Boston—High School.
South Hill—High School.
South Norfolk—High School.
Staunton—
  High School.
  *Military Academy.*
Strasburg—High School.
Suffolk—Jefferson High School.
Tazewell—High School.
Toano—High School.
Turbeville—Agricultural High School.
Wakefield—High School.
Warrenton—
  High School.
  *Stuyvesant School.*
Waverly—High School.
Waynesboro—*Fishburne Military Academy.*
Whaleyville—High School.
White Stone—High School.
Wicomico—High School.
Winchester—
  High School.
  *Shenandoah Valley Academy.*[1]
Woodberry Forest—*School.*[1]
Woodlawn—High School.
Woodstock—
  High School.
  *Massanutten Academy.*[1]
Wytheville—High School.

"First Grade" secondary schools, in addition to those accredited by the University of Virginia, accredited by the State board of education, for 1914.

In order to be rated as "First Grade" a school must require 16 units for graduation, distributed as follows:

| | Units. |
|---|---|
| English | 4 |
| Mathematics | 3 |
| History | 2 |
| Science | 2 |
| Electives | 5 |

Albemarle—*Miller Manual Training School.*
Amherst—High School.
Armstrong—High School.
Blackstone—*Female Institute.*
Botecourt—High School.
Burkeville—*Ingleside Seminary.*
Chase City—
  *Southside Female Institute.*
  *Thyne Institute* (*colored*).
Chatham—*Episcopal Institute.*
Cheriton—High School.
Chincoteague—High School.
Courtland—High School.
Danville—*Randolph-Macon Institute.*
Disputanta—High School.
Edinburg—High School.
Grundy—High School.[2]
Hayes Store—High School.
Houston—High School.
Jarratt—High School.
Kinsale—High School.
Lawrenceville—*St. Paul Normal and Industrial Institute* (*colored*).
Lynchburg—*Virginia Theological Seminary and College.*
Marion—High School.
Manassas—
  *Eastern College.*
  *Industrial Institute* (*colored*).
New Castle—High School.
Palmyra—Normal.
Parksley—High School.
Richmond—*Hartshorn Memorial College.*
Roanoke—*Institute.*
Staunton—*Stuart Hall.*
Stony Creek—High School.
Sussex—High School.
Unionville—High School.
Williamsburg—*Female Institute.*
Winchester—*Fort Loudoun Seminary.*

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[1] Accredited also by the Virginia Commission on Accredited Schools.
[2] Accredited subject to inspection.

## WASHINGTON.

**Accredited by the State board of education and the University of Washington, May, 1914.**

| | Units. |
|---|---|
| **Admission requirements** | **15** |
| **Prescribed units:** | |
| **English** | **3** |
| **Mathematics** | **2½** |
| **Foreign language** | **2** |
| **Science** | **1** |
| **History** | **1** |
| **Electives** | **5½** |

Aberdeen—High School.
Anacortes—High School.
Arlington—High School.
Asotin—High School.
Auburn—High School.
Bellingham (North)—High School.
Bellingham (South)—High School.
Blaine—High School.
Bothwell—High School.
Bremerton-Charleston—High School.
Buckley—High School.
Burlington—Union High School.
Burton—Union High School.
Camas—High School.
Cashmere—High School.
Castle Rock—High School.
Centralia—High School.
Chehalis—High School.
Chelan—High School.
Cheney—High School.
Chewelah—High School.
Clarkston—High School.
Cle Elum—High School.
Colfax—High School.
Colville—High School.
Coupeville—High School.
Creston—High School.
Davenport—High School.
Dayton—High School.
Deer Park—High School.
Edmonds—High School.
Ellensburg—High School.
Elma—High School.
Endicott—High School.
Enumclaw—High School.
Everett—High School.
Fairfield—High School.
Ferndale—High School.
Friday Harbor—High School.
Garfield—High School.
Goldendale—High School.
Grandview—High School.
Granite Falls—High School.
Harrington—High School.
Hillyard—High School.
Hoquiam—High School.
Juneau (Alaska)—High School.
Kalama—High School.
Kelso—High School.
Kennewick—High School.
Kent—High School.
Kirkland—High School.
Kittitas—High School.
La Conner—High School.
Latah—High School.
Lebam—High School.
Lind—High School.
Lynden—High School.
Mabton—High School.
Marysville—High School.
Monroe—High School.
Montesano—High School.
Mount Vernon—High School.
Newport—High School.
North Yakima—High School.
Oakesdale—High School.
Odessa—High School.
Olympia—High School.
Outlook—High School.
Palouse—High School.
Pasco—High School.
Pomeroy—High School.
Port Angeles—High School.
Port Townsend—High School.
Prosser—High School.
Pullman—High School.
Puyallup—High School.
Raymond—High School.
Reardan—High School.
Renton—High School.
Richland—High School.
Ridgeville—High School.
Ritzville—High School.
Rosalia—High School.
Roslyn—High School.
Seattle—
    *Adelphia College (Academic Department).*
    Ballard High School.
    Broadway High School.
    Franklin High School.
    *Holy Names Academy.*
    Lincoln High School.
    Queen Anne High School.
    *St. Nicholas School.*
    *Seattle Seminary.*
    West Seattle High School.
Sedro Woolley—High School.
Selah—High School.
Shelton—High School.
Snohomish—High School.
South Bend—High School.
Spokane—
    *Brunot Hall.*
    *Holy Names Academy.*
    Lewis and Clark High School.
    North Central High School.
Sprague—High School.
Stanwood—High School.
Stevenson—High School.
Sultan—Union High School.
Sumas—High School.
Sumner—High School.

Sunnyside—High School.
Tacoma—
    *Annie Wright Seminary.*
    Stadium High School.
    *University of Puget Sound (Preparatory Department).*
    *Whitworth College Academy.*
Tekoa—High School.
Tenino—High School.
Toppenish—High School.
Vancouver—High School.
Vashon—High School.
Waitsburg—High School.
Walla Walla—
    High School.
    *St. Paul's Academy.*
    *Walla Walla College Academy.*
Wapato—High School.
Waterville—High School.
Wenatchee—High School.
White Salmon—High School.
Wilbur—High School.
Winlock—High School.
Winslow—High School.
Woodland—High School.

## WEST VIRGINIA.

"First-class" secondary schools approved by the Department of Free Schools of West Virginia and accredited by West Virginia University, October, 1914.

| | Units. |
|---|---|
| Admission requirements | 15 |
| Prescribed units: | |
| English | 3 |
| Latin | 2 |
| Mathematics | 2 |
| Science | 1 |
| History | 1 |
| Electives | 6 |

Academy—High School.
Athens—State Normal School.
Barboursville—*Morris-Harvey College, Preparatory School.*
Beckley—*Institute, High School Department.*
Berkeley Springs—High School.
Bethany—*College, Preparatory School.*
Bluefield—High School.
Bridgeport—High School.
Buckhannon—
    High School.
    *Wesleyan College, Preparatory School.*
Cairo—High School.
Cameron—High School.
Ceredo—High School.
Charleston—
    High School.
    High School (Colored).
Charles Town—High School.
Chester—High School.
Clarksburg—High School.
Davis—High School.
Edgington—High School.
Elkins—
    High School.
    *Davis-Elkins College, Preparatory School.*
Fairmont—
    High School.
    State Normal School.
Flemington—High School.
Glenville—State Normal School.
Grafton—High School.
Hinton—High School.
Huntington—
    High School.
    State Normal School.
Keyser—
    High School.
    State Preparatory School.
Kingwood—High School.
Lewisburg—*Seminary.*
Mannington—High School.
Martinsburg—High School.
Middlebourne—High School.
Montgomery—State Preparatory School.
Morgantown—High School.
Moundsville—High School.
Mount Hope—High School.
New Cumberland—High School.
New Martinsville—Magnolia High School.
Oak Hill—High School.
Parkersburg—
    High School.
    High School (Colored).
Parsons—High School.
Philippi—*Broaddus Institute, Preparatory School.*
Piedmont—High School.
Ravenswood—High School.
Ronceverte—High School.
St. Marys—High School.
Salem—
    *College, Preparatory School.*
    High School.
Shepherdstown—State Preparatory School.
Shinnston—High School.
Sistersville—High School.
Spencer—High School.
Sutton—High School.
Terra Alta—High School.
Thomas—High School.
Welch—High School.
Wellsburg—High School.
West Liberty—State Normal School.
Weston—High School.
Wheeling—
    High School.
    *Lindsly Institute.*
Williamson—High School.
Williamstown—High School.

## WISCONSIN.

Accredited by the University of Wisconsin, June 1, 1914.

| | Units. |
|---|---|
| Admission requirements | 14 |
| Prescribed units: | |
| English | 2 |
| Mathematics | 2 |
| Foreign language | 2 |
| Electives | 8 |

Abbotsford—High School.
Albany—High School.
Algoma—High School.
Alma—High School.
Almond—High School.
Altoona—*St. Mary's Boarding and High School.*
Amery—High School.
Amherst—High School.
Antigo—High School.
Appleton—High School.
Arcadia—High School.
Arena—High School.
Argyle—High School.
Ashland—
  High School.
  *Northland Academy.*
Athens—High School.
Augusta—High School.
Baldwin—High School.
Bangor—High School.
Baraboo—High School.
Barron—High School.
Bayfield—High School.
Beaver Dam—
  High School.
  *Wayland Academy.*
Belleville—High School.
Belmont—High School.
Beloit—High School.
Berlin—High School.
Black Earth—High School.
Black River Falls—High School.
Blair—High School.
Blanchardville—High School.
Bloomer—High School.
Bloomington—High School.
Blue River—High School.
Boscobel—High School.
Brandon—High School.
Brillion—High School.
Brodhead—High School.
Brooklyn—High School.
Burlington—High School.
Cadott—High School.
Cambria—High School.
Cambridge—High School.
Cashton—High School.
Cassville—High School.
Cedarburg—High School.
Cedar Grove— *Wisconsin Memorial Academy.*
Chetek—High School.
Chilton—High School.
Chippewa Falls—
  High School.
  *McDonell Memorial High School.*
Clinton—High School.
Clintonville—High School.
Cobb—High School.
Colby—High School.
Columbus—High School.
Crandon—High School.
Cuba—High School.
Cumberland—High School.
Darien—High School.
Darlington—High School.
Deerfield—High School.
De Forest—High School.
Delafield—*St. John's Military Academy.*
Delavan—High School.
De Pere—High School.
Dodgeville—High School.
Durand—High School.
Eagle River—High School.
East Troy—High School.
Eau Claire—High School.
Edgar—High School.
Edgerton—High School.
Elkhorn—High School.
Ellsworth—High School.
Elroy—High School.
Endeavor—*Endeavor Academy.*
Evansville—
  *Evansville Seminary.*
  High School.
Fairchild—High School.
Fennimore—High School.
Fifield—High School.
Florence—High School.
Fond du Lac—
  *Grafton Hall.*
  High School.
  *St. Mary's Springs Academy.*
Fort Atkinson—High School.
Fountain City—High School.
Fox Lake—High School.
Frederic—High School.
Galesville—High School.
Genoa Junction—High School.
Gillett—High School.
Glenbeulah—High School.
Glenwood City—High School.
Goodman—High School.
Grand Rapids—High School.
Grantsburg—High School.
Green Bay (East)—High School.
Green Bay (West)—
  High School.
  *St. Joseph's Academy.*
Green Lake—High School.
Greenwood—High School.
Hammond—High School.
Hancock—High School.
Hartford—High School.
Hayward—High School.
Hazel Green—High School.
Highland—High School.
Hillsboro—High School.
Hillside—*Hillside Home School.*

Hixton—High School.
Horicon—High School.
Hudson—
    High School.
    *Galahad, a School for Boys.*
Humbird—High School.
Hurley—High School.
Independence—High School.
Iola—High School.
Iron River—High School.
Janesville—High School.
Jefferson—High School.
Juneau—High School.
Kaukauna—High School.
Kendall—High School.
Kenosha—High School.
Kewaunee—High School.
Kewaskum—High School.
Kiel—High School.
Kilbourn—High School.
La Crosse—High School.
Ladysmith—High School.
La Farge—High School.
Lake Geneva—High School.
Lake Mills—High School.
Lancaster—High School.
Linden—High School.
Little Chute—High School.
Livingston—High School.
Lodi—High School.
Lone Rock—High School.
Loyal—High School.
Madison—
    High School.
    *Sacred Heart Academy.*
    The Wisconsin High School.
Manawa—High School.
Manitowoc—High School.
Marinette—High School.
Marion—High School.
Markesan—High School.
Marshall—High School.
Marshfield—High School.
Mattoon—High School.
Mauston—High School.
Mayville—High School.
Mazomanie—High School.
Medford—High School.
Mellen—High School.
Menasha—High School.
Menomonee Falls—High School.
Menomonie—High School.
Merrill—High School.
Merrillan—High School.
Middleton—High School.
Milton—
    High School.
    *Milton College Academy.*
Milton Junction—High School.
Milwaukee—
    East Division High School.
    *German-English Academy.*
    *Milwaukee-Downer Seminary.*
    North Division High School.
    *Our Lady of Mercy High School.*
    South Division High School.
    *St. John's Cathedral School.*
    West Division High School.
Mineral Point—High School.
Minocqua—High School.
Mondovi—High School.
Monroe—High School.
Montello—High School.
Montfort—High School.
Mount Horeb—High School.
Mukwonago—High School.
Muscoda—High School.
Necedah—High School.
Neenah—High School.
Neillsville—High School.
New Holstein—High School.
New Lisbon—High School.
New London—High School.
New Richmond—High School.
North Fond du Lac—High School.
Oakfield—High School.
Oconomowoc—High School.
Oconto—High School.
Oconto Falls—High School.
Omro—High School.
Onalaska—High School.
Oregon—High School.
Osceola—High School.
Oshkosh—High School.
Palmyra—High School.
Pardeeville—High School.
Park Falls—High School.
Pepin—High School.
Peshtigo—High School.
Pewaukee—High School.
Phillips—High School.
Plainfield—High School.
Platteville—High School.
Plymouth—High School.
Portage—High School.
Port Washington—High School.
Poynette—High School.
Prairie du Chien—
    High School.
    *St. Mary's Academy.*
Prairie du Sac—High School.
Prentice—High School.
Prescott—High School.
Princeton—High School.
Racine—
    *College Grammar School.*
    High School.
    *St. Catherine's Academy.*
Randolph—High School.
Redgranite—High School.
Reedsburg—High School.
Reeseville—High School.
Rhinelander—High School.
Rib Lake—High School.
Rice Lake—High School.
Richland Center—High School.
Rio—High School.
Ripon—High School.
River Falls—High School.
Roberts—High School.
Rosendale—High School.
St. Croix Falls—High School.
St. Francis—*Pio Nono College (High School Course).*
Sauk City—High School.
Seneca—High School.
Seymour—High School.

Sharon—High School.
Shawano—High School.
Sheboygan—High School.
Sheboygan Falls—High School.
Shell Lake—High School.
Shiocton—High School.
Shullsburg—High School.
Sinsinawa—*St. Clara Academy.*
Soldiers Grove—High School.
South Milwaukee—High School.
Sparta—High School.
Spooner—High School.
Spring Green—High School.
Spring Valley—High School.
Stanley—High School.
Stevens Point—High School.
Stoughton—High School.
Stratford—High School.
Sturgeon Bay—High School.
Sun Prairie—High School.
Superior—
  High School.
  Nelson Dewey High School.
Thorp—High School.
Tigerton—High School.
Tomah—High School.
Tomahawk—High School.
Trempealeau—High School.
Two Rivers—High School.
Union Grove—High School.
Unity—High School.
Verona—High School.
Viola—High School.
Viroqua—High School.
Wabeno—High School.
Waldo—High School.
Walworth—High School.
Washburn—High School.
Waterford—High School.
Waterloo—High School.
Watertown—High School.
Waukesha—High School.
Waunakee—High School.
Waupaca—High School.
Waupun—High School.
Wausau—High School.
Wausaukee—High School.
Wautoma—High School.
Wauwatosa—High School.
West Allis—High School.
West Bend—High School.
Westboro—High School.
Westby—High School.
West De Pere—High School.
Westfield—High School.
West Salem—High School.
Weyauwega—High School.
Whitehall—High School.
Whitewater—High School.
Wild Rose—High School.
Wilmot—High School.
Wilton—High School.
Winneconne—High School.
Wittenberg—High School.
Wonewoc—High School.

## WYOMING.

Accredited by the University of Wyoming, May, 1914.

| | Units. |
|---|---|
| Admission requirements | 14 |
| Prescribed units: | |
| English | 3 |
| Mathematics | 2 |
| Foreign language | 2 |
| Electives | 7 |

Basin—High School.
Buffalo—High School.
Casper—High School.
Cheyenne—High School.
Cody—High School.
Douglas—High School.
Evanston—High School.
Green River—High School.
Kemmerer—High School.
Lander—High School.
Laramie—High School.
Newcastle—High School.
Rawlins—High School.
Rock Springs—High School.
Sheridan—High School.
Wheatland—High School.

# PART II.—LISTS OF ACCREDITING ASSOCIATIONS.

## The Commission on Accredited Schools of the Southern States, of the Association of Colleges and Preparatory Schools of the Southern States.

The minimum standard for accrediting shall be:

(*a*) No school shall be accredited which does not require for graduation the completion of a four-year high-school course of study embracing 14 units as defined by this association. A unit represents a year's study n any subject in a secondary school, constituting approximately a quarter of a full year's work. More than 20 periods per week should be discouraged.

(*b*) The minimum scholastic attainment of three-fourths of all secondary school teachers of academic subjects in any accredited school on the southern list shall be equivalent to graduation from a college belonging to the Association of Colleges and Secondary Schools of the Southern States, or a college approved by the commission. It is strongly advised that this attainment include, or be supplemented by, special study of the content and pedagogy of the subject taught.

(*c*) The number of daily periods of class instruction given by any teacher should not exceed five periods per day; and the commission will scrutinize with extreme care any school in which instructors teach as many as six daily periods.

(*d*) The laboratory and library facilities shall be adequate for the needs of instruction in the courses taught.

(*e*) The location and construction of the buildings, the lighting, heating, and ventilation of the rooms, the nature of the lavatories, corridors, water supply, school furniture, apparatus, and methods of cleaning shall be such as to insure hygienic conditions for both pupils and teachers.

(*f*) The efficiency of instruction, the acquired habits of thought and speech, the general intellectual and moral tone of a school are paramount factors and, therefore, only schools which rank well in these particulars, as evidenced by rigid, thoroughgoing, sympathetic inspection, shall be considered eligible for the list.

(*g*) The commission will decline to consider any school whose teaching force consists of fewer than three teachers of academic subjects giving their full time to high-school instruction. When local conditions warrant the introduction of the so-called vocational subjects, such as agriculture, manual training, household arts, and commercial subjects, the commission will hold that a sufficient number of teachers must be added to provide adequately for such instruction.

* * * * * * *

(*i*) All schools whose records show an excessive number of pupils per teacher, as based on the average number belonging, even though they may technically meet all other requirements, will be rejected. The association recognizes 30 as maximum.

Schools accredited for the year 1913-14.

## ALABAMA.

Andalusia—High School.
Athens—*Greene University School.*
Birmingham—
    Central High School.
    *Howard Academy.*
Centerville—Bibb County High School.
Daphne—State Normal School.
Decatur—High School.
Dothan—High School.
Ensley—High School.
Eufaula—High School.
Gadsden—High School.
Huntsville—High School.
Mobile—
    High School.
    *University Military School.*
Montgomery—Sidney Lanier High School.
New Decatur—High School.
Rogersville—Lauderdale County High School.
Selma—High School.
Talladega—High School.
Tuscaloosa—High School.
Union Springs—High School.

## ARKANSAS.

Argenta—High School.
Blytheville—High School.
Camden—High School.
Eureka Springs—*Crescent College Academy.*
Hot Springs—High School.
Paragould—High School.
Pine Bluff—High School.
Texarkana—High School.
Warren—High School.

## FLORIDA.

Arcadia—De Soto County High School.
Bradentown—Manatee County High School.
Clearwater—High School.
Daytona—High School.
Fort Myers—Gwynne High School.
Gainesville—High School.
Jacksonville—
    Duval County High School.
    *Florida Military Academy.*
Key West—Harris High School.
Kissimmee—Osceola County High School.
Lakeland—High School.
Miami—High School.
Ocala—High School.
Pensacola—High School.
Plant City—High School.
Quincy—Gadsden County High School.
St. Augustine—High School.
St. Petersburg—High School.
Sanford—High School.
Seabreeze—Seabreeze-Daytona Beach High School.
Tallahassee—Leon High School.
Tampa—Hillsborough County High School.
Wauchula—High School.
West Palm Beach—High School.

## GEORGIA.

Athens—High School.
Atlanta—
  Boys' High School.
  Girls' High School.
  *Marist College.*
  *Peacock-Fleet School.*
Augusta—
  Richmond Academy.
  Tubman High School.
Barnesville—*Gordon Institute.*
Brunswick—*Glynn Academy.*
Cartersville—High School.
Cedartown—High School.
Columbus—High School.
College Park—*Georgia Military Academy.*
Dublin—High School.
Elberton—High School.
Fitzgerald—High School.
Fort Valley—High School.
Gainesville—*Riverside Military Academy.*
Greensboro—High School.
Griffin—High School.
Lagrange—High School.
Locust Grove—*Institute.*
Madison—High School.
Marietta—High School.
Milledgeville—Georgia Military College.
Newnan—High School.
Quitman—High School.
Rome—
  *Darlington Academy.*
  High School.
Savannah—
  *Benedictine College.*
  *Chatham Academy.*
Thomaston—*R. E. Lee Institute.*
Thomasville—High School.
Valdosta—High School.

## KENTUCKY.

Ashland—High School.
Bellevue—High School.
Covington—High School.
Cynthiana—High School.
Dayton—High School.
Frankfort—High School.
Franklin—High School.
Georgetown—High School.
Henderson—High School.
Lexington—High School.
Louisville—
  Boys' High School.
  Girls' High School.
Ludlow—High School.
Lyndon—*Kentucky Military Institute.*
Maysville—High School.
Mount Sterling—High School.
Newport—High School.
Owensboro—High School.
Paducah—High School.
Richmond—Model High School.
Stanford—High School.
Sturgis—High School.

## LOUISIANA.

Homer—High School.
Houma—Terrebonne High School.
Monroe—Ouachita Parish High School.
New Orleans—*Isidore Newman Manual Training School.*
Shreveport—High School.

## MISSISSIPPI.

Clarksdale—High School.
Greenville—High School.
Greenwood—High School.
Gulfport—High School.
Jackson—High School.
Laurel—High School.
McComb—High School.
Natchez—High School.
Port Gibson—*Chamberlain-Hunt Academy.*

## NORTH CAROLINA.

Asheville—
  *Asheville School.*
  *Bingham School.*
  City High School.
  *St. Genevieve's College and Academy.*
Charlotte—
  High School.
  *Horner Military School.*
Durham—
  High School.
  *Trinity Park School.*
Elizabeth City—High School.
Flat Rock—*Fleet School.*
Goldsboro—High School.
Greensboro—High School.
Lincolnton—*Fassifern School.*
Raleigh—High School.
Warrenton—High School.
Wilmington—High School.
Winston-Salem—City High School.

## SOUTH CAROLINA.

Anderson—High School.
Bamberg—High School.
Bennettsville—High School.
Charleston—
    High School.
    *Porter Military Academy.*
Darlington—High School.
Florence—High School.
Greenwood—High School.
Latta—High School.
Marion—High School.
North Augusta—High School.
St. Matthews—High School.
Spartanburg—*Wofford Fitting School.*
Summerville—High School.
Sumter—High School.

## TENNESSEE.

Benton—Polk County High School.
Chattanooga—
    *Girls' Preparatory School.*
    High School.
    *McCallie School.*
Columbia—*Military Academy.*
Concord—Farragut High School.
Covington—Byars-Hall High School.
Fayetteville—*Morgan School.*
Martin—*McFerrin Training School.*
Memphis—
    City High School.
    *Higbee School.*
    *University School.*
Nashville—
    Hume-Fogg High School.
    *Montgomery-Bell Academy.*
Pulaski—*Massey School.*
Sewanee—*Sewanee Military Academy.*
Tullahoma—*Fitzgerald and Clarke School.*

## TEXAS.

Abilene—High School.
Amarillo—High School.
Austin—
    High School.
    *Whitis School.*
Beaumont—High School.
Belton—High School.
Bonham—High School.
Cameron—High School.
Corsicana—High School.
Cleburne—High School.
Dallas—
    High School.
    Oak Cliff High School.
    *Terrill School.*
El Paso—High School.
Fort Worth—High School.
Gainesville—High School.
Galveston—Ball High School.
Greenville—High School.
Henderson—High School.
Hillsboro—High School.
Houston—High School.
Longview—High School.
Marlin—High School.
Marshall—High School.
McGregor—High School.
Nacogdoches—High School.
Port Arthur—High School.
Quanah—High School.
San Angelo—High School.
San Antonio—*Academy.*
San Marcos—*Baptist Academy.*
Sherman—High School.
Stamford—High School.
Sweetwater—High School.
Temple—High School.
Terrell—High School.
Victoria—High School.
Waco—High School.
Waxahachie—High School.
Wichita Falls—High School.

## VIRGINIA.

Alexandria—*Episcopal High School.*
Bedford—*Randolph-Macon Academy.*
Bristol—High School.
Charlottesville—High School.
Danville—*The Danville School.*
Front Royal—*Randolph-Macon Academy.*
Harrisonburg—High School.
Lexington—High School.
Lynchburg—High School.
Manassas—Agricultural High School.
Norfolk—Maury High School.
Petersburg—High School.
Portsmouth—High School.
Richmond—
    John Marshall High School.
    *McGuire's University School.*
Roanoke—City High School.
South Boston—High School.
Staunton—
    High School.
    *Stuart Hall.*
Suffolk—Jefferson High School.
Winchester—*Shenandoah Valley Academy.*
Woodberry Forest—*School.*
Woodstock—*Massanutten Academy.*
Wytheville—High School.

## WEST VIRGINIA.

Beckley—*Institute.*
Benwood—Union High School.
Bluefield—Beaver High School.
Cairo—High School.
Cameron—High School.
Ceredo—Ceredo-Kenova High School
Charleston—High School.
Chester—High School.
Clarksburg—High School
Davis—High School.
Elkins—High School.
Fairmount—High School.
Grafton—High School.
Hillsboro—High School.
Hinton—High School.
Huntington—High School.
Keyser—
    High School.
    State Preparatory School.
Kingwood—High School.
Mannington—High School.
Martinsburg—High School.
Montgomery—State Preparatory School.
Morgantown—High School.
Mount Hope—High School.
New Cumberland—High School.
New Martinsville—Magnolia High School.
Oak Hill—High School.
Parkersburg—High School.
Piedmont—High School.
Philippi—*Broaddus Institute.*
St. Marys—High School.
Shinnston—Clay District High School.
Spencer—High School.
Terra Alta—High School.
Thomas—High School.
Welch—High School.
Wellsburg—High School.
Weston—High School.
Wheeling—
    (Edgewood) Tridelphia District High School.
    High School.
Williamson—High School.
Williamstown—High School.

## New England College Entrance Certificate Board.

Members of the board: Amherst College, Bates College, Boston University, Bowdoin College, Brown University, Colby College, Massachusetts Agricultural College, Middlebury College, Mount Holyoke College, Smith College, Tufts College, University of Vermont, Wellesley College, Wesleyan University, Williams College.

A school to be approved by the board must—

(1) Give satisfactory evidence as to curriculum, staff of teachers, and equipment;

(2) Be able to prepare for college according to some one of the recognized plans for entering a college represented on the board;

* * * * * * *

(4) Have sent on examination within a period of three years preceding the time of application at least two students to one or more of the colleges represented on the board.

A school when first approved is placed on a trial list. If the record made by its candidates in the colleges represented on the board is satisfactory, it is then placed on the approved list.

Schools approved by the board, May 12, 1914.

## CONNECTICUT.

Ansonia—High School.
Bridgeport—*Courtland School.*
Bristol—High School.[1]
Central Village—Plainfield High School.[1]
Clinton—*Morgan School.*
Danbury—High School.
Danielson—Killingly High School.
Derby—High School.
East Hartford—High School.[1]
Greenwich—
    *Academy.*
    High School.
    *Rosemary Hall School.*[1]
Hartford—Public High School.
Lakeville—*Taconic School for Girls.*
Meriden—High School.
Middlebury—*Westover School.*
Middletown—
    High School.
    *The Misses Patten's School.*
New Britain—Public High School.
New Haven—High School.
New London—
    *Bulkeley School.*
    *Williams Memorial Institute.*
New Milford—High School.[1]
Newtown—High School.
Norwalk—
    High School.
    *Hillside School.*
Norwalk—High School.
Norwalk—*Hillside School.*
Norwich—*Free Academy.*
Portland—High School.
Putnam—High School.
Redding—*Sanford School.*[1]
Ridgefield—*School.*[1]
Seymour—High School.[1]
Shelton—High School.
Southington—Lewis High School.

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[1] On the trial list for 1914.

South Manchester—High School.
Stamford—
  High School.
  *The Catherine Aiken School.*
  *The Stamford Preparatory School.*
Stonington—High School.
Stratford—High School.[1]
Suffield—*Connecticut Literary Institution.*
Thompsonville—Enfield Public High School.
Vernon—Rockville High School.
Wallingford—
  Central District High School.
  *The Choate School.*[1]
Washington—
  *The Gunnery School.*
  *Wykeham Rise.*
Waterbury—
  Crosby High School.
  *St. Margaret's School.*
Watertown—*The Taft School.*
West Hartford—High School.
West Haven—High School.[1]
Willimantic—Windham High School.
Windsor—High School.
Winsted—*Gilbert School.*

## MAINE.

Auburn—Edward Little High School.
Augusta—Cony High School.
Bangor—High School.
Bar Harbor—High School.
Bath—Morse High School.
Belfast—High School.
Bethel—*Gould's Academy.*
Biddeford—High School.
Bluehill—*Bluehill George Stevens Academy.*
Bowdoinham—High School.[1]
Brewer—High School.
Bridgton—High School.
Brunswick—High School.
Bucksport—*East Maine Conference Seminary.*
Calais—Academy.
Camden—High School.
Charleston—*Higgins Classical Institute.*
Cumberland Center—*Greeley Institute.*[1]
Dexter—High School.
East Livermore—Livermore Falls High School.
East Machias: *Washington Academy.*
Eastport: Boynton High School.
Ellsworth: High School.
Farmington—
  High School.
  *The Abbott School.*
Fort Fairfield—High School.
Foxcroft—*Academy.*
Freedom—*Academy.*
Freeport—High School.[1]
Fryeburg—*Academy.*
Gorham—High School.
Guilford—High School.
Hallowell—High School.
Hampden—Academy.
Hebron—*Academy.*
Hinckley—Good Will High School.[1]
Houlton—
  High School.
  *Ricker Classical Institute.*
Kent's Hill—*Maine Wesleyan Seminary.*
Lewiston—High School.
Lisbon Falls—High School.
Machias—High School.[1]
Madison—High School.
Newcastle—*Lincoln Academy.*
North Bridgton—*Bridgton Academy.*
Norway—High School.
Old Town—High School.
Orono—High School.
Oxford—High School.[1]
Phillips—High School.[1]
Pittsfield—*Maine Central Institute.*
Portland—
  Deering High School.
  High School.
  *Waynflete School.*
  *Westbrook Seminary.*
Presque Isle—High School.
Richmond—High School.
Rockland—High School.
Rockport—High School.[1]
Rumford—Stephens High School.
Saco—*Thornton Academy.*
Skowhegan—Skowhegan High School and Bloomfield Academy.
South Berwick—*Berwick Academy.*[1]
South Paris—Paris High School.
South Portland—High School.
Topsham—High School.[1]
Vassalboro—*Oak Grove Seminary.*
Waterville—
  *Coburn Classical Institute.*
  High School.
Wells—High School.
Westbrook—High School.
Wilton—*Academy.*
Winthrop—High School.[1]
York—High School.

## MASSACHUSETTS.

Abington—High School.
Adams—High School.
Amherst—High School.
Andover—
  *Abbot Academy.*
  *Phillips Academy.*
  Punchard High School.
Arlington—High School.
Ashburnham—*Cushing Academy.*
Ashland—High School.
Athol—High School.
Attleboro—High School.
Auburndale—*Lasell Seminary.*
Ayer—High School.
Barre—Henry Woods High School.
Belmont—High School.

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[1] On the trial list for 1914.

Boston—
  *Berkeley Preparatory School.*
  Brighton High School.
  *Miss Cummings's School.*
  Dorchester High School.
  East Boston High School.
  English High School.
  Girls' High School.
  Girls' Latin School.
  *Miss Guild's and Miss Evans's School.*
  *Huntington School.*
  Mechanics Arts High School.
  Public Latin School.
  Roxbury High School.
  South Boston High School.
  *The von Mach School for Girls.*[1]
  West Roxbury High School.
  *The Winsor School.*[1]
Bradford—*Academy.*
Bridgewater—High School.
Brimfield—*Hitchcock Free Academy.*[1]
Brockton—High School.
Brookline—High School.
Cambridge—High and Latin School.
Chelsea—High School.
Chicopee—High School.
Clinton—High School.
Concord—High School.
Dalton—High School.
Danvers—Holton High School.
Dedham—High School.
Deerfield—Academy and Dickinson High School.
Easthampton—
  High School.
  *Williston Seminary.*
East Northfield—*Northfield Seminary.*
East Weymouth—Weymouth High School.
Everett—High School.
Fairhaven—High School.
Fall River—B. M. C. Durfee High School.
Falmouth—Lawrence High School.
Fitchburg—High School.
Foxboro—High School.
Framingham—High School.
Franklin—
  *Dean Academy.*
  Horace Mann High School.
Gardner—High School.
Gloucester—High School.
Grafton—High School.
Greenfield—High School.
Groveland—High School.
Hadley—Hopkins Academy.
Hatfield—*Smith Academy.*
Haverhill—High School.
Hingham—High School.
Holliston—High School.
Holyoke—High School.
Hudson—High School.
Hyde Park—High School.
Kingston—High School.
Lawrence—High School.
Lee—High School.
Leicester—*Academy.*
Leominster—High School.
Lexington—High School.
Lowell—
  High School.
  *Rogers Hall School.*
Lynn—
  Classical High School.
  English High School.
Malden—High School.
Manchester—Story High School.
Mansfield—High School.
Marblehead—High School.
Marion—*Tabor Academy.*
Marlborough—High School.
Maynard—High School.
Medford—High School.
Melrose—High School.
Methuen—High School.
Middleboro—High School.
Milford—High School.
Milton—High School.
Monson—*Academy.*
Mount Hermon—*Boys' School.*
Natick—
  High School.
  *Walnut Hill School for Girls.*
Needham—High School.
New Bedford—High School.
Newburyport—High and Putnam Schools.
Newton—*Mount Ida School for Girls.*
Newtonville—
  Newton High School.
  Technical High School.[1]
North Adams—Drury High School.
Northampton—
  High School.
  *Miss Capen's School for Girls.*
  St. Michael's High School.
  *The Mary A. Burnham School for Girls.*
North Andover—Johnson High School.
North Attleboro—High School.[1]
North Brookfield—High School.
Norton—
  High School.
  *Wheaton Seminary.*
Norwood—High School.
Orange—High School.
Palmer—High School.
Peabody—High School.
Pepperell—High School.[1]
Pittsfield—
  High School.
  *Miss Hall's School.*
Plymouth—High School.
Provincetown—High School.
Quincy—
  High School.
  *Woodward Institute.*
Revere—High School.
Rockland—High School.
Salem—Classical and High School.
Sandwich—High School.
Saugus—High School.
Scituate—High School.

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[1] On the trial list for 1914.

Sharon—High School.
Shelburne—Arms Academy.
Somerville—High School.
South Baintree—*Thayer Academy.*
Southbridge—High School.
South Byfield—*Dummer Academy.*[1]
Springfield—
- *American International College.*
- Central High School.
- *The Elms.*
- *The MacDuffee School for Girls.*
- Technical High School.

Stoneham—High School.
Stoughton—Kimball High School.
Sudbury—High School.[1]
Swampscott—High School.
Taunton—High School.
Turners Falls—High School.
Upton—High School.
Uxbridge—High School.
Wakefield—High School.
Waltham—High School.
Ware—High School.
Wareham—High School.
Warren—High School.
Webster—High School.
Wellesley—
- Dana High School.
- High School.

West Bridgewater—
- Howard High School.
- *Howard Seminary.*

Westfield—High School.
West Springfield—High School.[1]
Whitinsville—Northbridge High School.
Whitman—Public High School.
Wilbraham—*Academy.*
Williamstown—High School.
Winchendon—Murdock High School.
Winchester—High School.
Winthrop—High School.
Woburn—High School.
Wollaston—*Quincy Mansion School.*
Worcester—
- *Academy.*
- Classical High School.
- English High School.
- *Kimball School.*
- South High School.

Wrentham—High School.

## NEW HAMPSHIRE.

Andover—*Proctor Academy.*
Berlin—High School.
Claremont—Stevens High School.
Concord—
- High School.
- *St. Mary's School for Girls.*
- *St. Paul's School.*

Derry—*Pinkerton Academy.*
Exeter—
- *Phillips Exeter Academy.*
- *Robinson Seminary.*

Franklin—High School.
Hanover—High School.
Hillsboro—High School.[1]
Keene—High School.
Kingston—*Sanborn Seminary.*
Laconia—High School.
Lancaster—High School.
Lebanon—High School.
Lisbon—High School.
Littleton—High School.
Manchester—High School.
Meriden—*Kimball Union Academy.*
Milford—High School.
Milton—Nute High School.
Nashua—High School.
New Hampton—*Literary Institution.*[1]
New London—*Colby Academy.*
Newport—Richards High School.
Pittsfield—High School.
Plymouth—High School.
Portsmouth—High School.
Rochester—High School.
Somersworth—High School.
Stratford—High School.
Tilton—*Seminary.*
Warner—Simons Free High School.
Wolfeboro—*Brewster Free Academy.*

## RHODE ISLAND.

Barrington Center—High School.
Bristol—Colt Memorial High School.
Central Falls—High School.
East Greenwich—*Academy.*[1]
East Providence—High School.
Newport—Rogers High School.
Pawtucket—High School.
Providence—
- Classical High School.
- Cranston High School.
- English High School.

Providence—Continued.
- Hope Street High School.
- *Miss Wheeler's School.*
- Morris Heights School.[1]
- *Moses Brown School.*
- Technical High School.

Wakefield—South Kingstown High School.
Warwick—High School.
Westerly—High School.
Wickford—North Kingstown High School.
Woonsocket—High School.

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[1] On the trial list for 1914.

## VERMONT.

Barre—
  *Goddard Seminary.*
  Spaulding High School.
Barton—Academy.
Bellows Falls—High School.
Bennington—High School.
Bethel—Whitcomb High School.
Bradford—Academy.
Brandon—High School.[1]
Brattleboro—High School.
Burlington—High School.
Chester—High School.[1]
Essex—Essex Junction High School.
Fairfax—*Bellows Free Academy.*
Fair Haven—High School.
Hardwick—Academy.
Jerico—High School.[1]
Johnson—High School.
Ludlow—Black River Academy.
Lyndon Center—*Lyndon Institute.*
Manchester—*Burr and Burton Seminary.*
Montpelier—
  High School.
  *Seminary.*
Morrisville—People's Academy.
Newport—High School.
North Craftsbury—*Craftsbury Academy.*
Orleans—High School.[1]
Poultney—*Troy Conference Academy.*
Proctor—High School.
Randolph—High School.
Richford—High School.
Rutland—High School.
St. Albans—High School.
St. Johnsbury—*Academy.*
Saxtons River—*Vermont Academy.*
South Royalton—High School.
Springfield—High School.
Stowe—High School.
Townshend—*Leland and Gray Seminary.*
Vergennes—High School.
Waterbury—High School.
White River Junction—Hartford High School.
Woodstock—High School.

## North Central Association of Colleges and Secondary Schools.

The following constitute the standards for accrediting secondary schools for the present year (1914):

1. No school shall be accredited which does not require 15 units for graduation. More than 20 periods per week should be discouraged.

2. The minimum scholastic attainment of teachers of academic subjects shall be equivalent to graduation from a college belonging to the North Central Association of Colleges and Secondary Schools. After 1915 the preparation of the teacher shall include at least 11 semester hours in education. This shall include special study of the subject matter and pedagogy of the subject to be taught. Such requirements shall not be construed as retroactive.

3. The number of daily periods of classroom instruction given by any teacher should not exceed 5, each to extend over at least 40 minutes in the clear. The board of inspectors will reject all schools having more than 6 recitation periods per day for any teacher.

4. The laboratory and library facilities shall be adequate to the needs of instruction in the subjects taught.

5. The location and construction of the buildings, the lighting, heating, and ventilation of the rooms, the nature of the lavatories, corridors, closets, water supply, school furniture, apparatus, and methods of cleaning shall be such as to insure hygienic conditions for both pupils and teachers.

6. The efficiency of instruction, the acquired habits of thought and study, the general intellectual and moral tone of a school are paramount factors, and therefore only schools which rank well in these particulars, as evidenced by rigid, thoroughgoing, sympathetic inspection, shall be considered eligible for the list.

7. The association will decline to consider any school whose teaching force consists of fewer than four teachers of academic subjects, exclusive of the superintendent. The association recommends the introduction of the so-called vocational subjects, such as agriculture, manual training, household arts, and commercial subjects, into schools where local conditions render such introduction feasible, but the inspectors will hold that a sufficient number of qualified teachers must be added to provide adequately for such instruction.

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9. No school whose records show an excessive number of pupils per teacher, based on average attendance, shall be accredited. The association recommends 25 as a maximum.

Schools accredited March 20, 1914.

## COLORADO.

Aspen—High School.
Boulder—Colorado State Preparatory School.
Canon City—
  High School.
  South Canon City High School.
Colorado City—High School.
Colorado Springs—High School.
Cripple Creek—High School.
Delta—High School.

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[1] On the trial list for 1914.

- Denver—
  - East Side High School.
  - Manual Training High School.
  - North Side High School.
  - South Side High School.
  - West Side High School.
- Durango—High School.
- Eaton—High School.
- Fort Collins—High School.
- Fort Morgan—High School.
- Fruita—High School.
- Glenwood—Garfield County High School.
- Golden—High School.
- Grand Junction—High School.
- Greeley—High School.
- Lamar—High School.
- Las Animas—Bent County High School.
- La Junta—High School.
- Leadville—High School.
- Longmont—High School.
- Loveland—High School.
- Monte Vista—High School.
- Pueblo—
  - High School (District 1).
  - High School (District 20).
- Rocky Ford—High School.
- Salida—High School.
- Telluride—High School.
- Trinidad—High School.
- Victor—High School.

## ILLINOIS.

- Aledo—*Drury Academy.*
- Alton—High School.
- Aurora—
  - East High School.
  - *Jennings Seminary.*
  - West High School.
- Batavia—High School.
- Beardstown—High School.
- Belleville—High School.
- Belvidere—High School.
- Bloomington—High School.
- Blue Island—High School.
- Bridgeport—High School (Township).
- Cairo—High School.
- Canton—High School.
- Carlinville—High School.
- Carthage—*College Academy.*
- Centralia—High School (Township).
- Champaign—High School.
- Charleston—High School.
- Chicago—
  - Austin High School.
  - Bowen High School.
  - Calumet High School.
  - Carl Schurz High School
  - Crane Technical High School.
  - Curtis High School.
  - Englewood High School.
  - *F. W. Parker School.*
  - Harrison Technical High School.
  - *Harvard School.*
  - Hyde Park High School.
  - *Kenwood Institute.*
  - Lake High School.
  - Lake View High School.
  - Lane Technical High School.
  - *Latin School.*
  - *Loyola Academy.*
  - Marshall High School.
  - McKinley High School.
  - Medill High School.
  - Phillips High School.
  - Senn High School.
  - Tuley High School.
  - *University High School.*
  - Waller High School.
- Chicago Heights—Bloom Township High School.
- Cicero—J. Sterling Morton Township High School.
- Clinton—High School.
- Collinsville—High School (Township).
- Danville—High School.
- Decatur—High School.
- De Kalb—High School (Township).
- Des Plaines—Maine Township High School.
- Dixon—
  - High School.
  - North High School.
- Downers Grove—High School.
- Dundee—High School.
- Duquoin—High School (Township).
- East St. Louis—High School.
- Edwardsville—High School.
- Elgin—
  - *Academy.*
  - High School.
- Elmhurst—*Evangelical Proseminar.*
- Evanston—
  - *Academy.*
  - High School (Township).
- Freeport—High School.
- Galesburg—High School.
- Galva—High School.
- Geneseo—High School (Township).
- Geneva—High School.
- Gibson City—Drummer Township High School.
- Godtrey—*Monticello Seminary.*
- Granite City—High School.
- Harrisburg—High School (Township).
- Harvard—High School.
- Harvey—Thornton Township High School.
- Highland Park—
  - Deerfield Township High School.
  - *Northwestern Military Academy.*
- Hinsdale—High School.
- Hoopeston—High School.
- Jacksonville—
  - High School.
  - *Illinois Woman's College Academy.*
  - *Whipple Academy.*
- Joliet—High School (Township).
- Kankakee—High School.
- Kenilworth—New Trier Township High School.
- Kewanee—High School.
- La Grange—Lyons Township High School.
- Lake Forest—
  - *Academy.*
  - *Ferry Hall.*
- La Salle—La Salle-Peru Township High School.

Lawrenceville—High School (Township).
Lexington—High School.
Lincoln—High School.
Lockport—High School (Township).
Lovington—High School (Township).
Macomb—
  Academic Department of Normal School.
  High School.
Marengo—High School.
Marshall—High School (Township).
Mattoon—High School.
Maywood—Proviso Township High School.
Moline—High School.
Monmouth—High School.
Morgan Park—
  *Academy.*
  High School (Township).
Morris—High School.
Morrison—High School.
Mount Carroll—*Frances Shimer School.*
Mount Vernon—High School (Township).
Murphysboro—High School (Township).
Naperville—
  High School.
  *Northwestern College Academy.*
Normal—High School.
Oak Park—Oak Park and River Forest Township High School.
Onarga—*Grand Prairie Seminary.*
Ottawa—High School (Township)
Paris—High School.
Paxton—High School.
Pekin—High School.
Peoria—
  *Bradley Polytechnic Institute.*
  Central High School.
  Manual Training High School.
Polo—High School.
Pontiac—High School (Township).
Princeton—High School (Township).
Quincy—High School.
Riverside—High School.
Robinson—High School (Township).
Rochelle—High School.
Rockford—High School.
Rock Island—
  *Augustana Academy.*
  High School.
St. Charles—High School.
Savannah—High School (Township).
Shelbyville—High School.
Sterling—High School (Township).
Streator—High School (Township).
Sullivan—High School.
Sycamore—High School.
Taylorville—High School (Township).
Tuscola—High School.
Upper Alton—*Western Military Academy.*
Urbana—High School.
Watseka—High School.
Waukegan—High School (Township).
West Chicago—High School.
Wheaton—
  *Academy.*
  High School.
Woodstock—High School.

## INDIANA.

Alexandria—High School
Anderson—High School.
Attica—High School.
Bedford—High School.
Bloomington—High School.
Brazil—High School.
Connersville—
  *Elmhurst School.*
  High School.
Crawfordsville—High School.
Crown Point—High School.
Culver—*Military Academy.*
Decatur—High School.
East Chicago—High School.
Elkhart—High School.
Evansville—High School.
Fort Wayne—High School.
Frankfort—High School.
Franklin—High School.
Gary—High School.
Goshen—High School.
Hammond—High School.
Hartford City—High School.
Howe—High School.
Huntington—High School.
Indianapolis—
  Manual Training High School.
  Shortridge—High School.
Jeffersonville—High School.
Kendallville—High School.
Kokomo—High School.
Lafayette—High School.
La Grange—High School.
La Porte—High School.
Lawrenceburg—High School.
Lebanon—High School.
Logansport—High School.
Madison—High School.
Michigan City—High School.
Mishawaka—High School.
Mount Vernon—High School.
Muncie—High School.
New Castle—High School.
Noblesville—High School.
North Manchester—High School.
Peru—High School.
Plymouth—High School.
Princeton—High School.
Rensselaer—High School.
Richmond—High School.
Rochester—High School.
Rushville—High School.
Shelbyville—High School.
Sheridan—High School.
South Bend—High School.
Sullivan—High School.
Terre Haute—
  Garfield High School.
  Normal Training High School.
  Wiley High School.
Union City—High School.
Valparaiso—High School.
Wabash—High School.
Washington—High School.
West Lafayette—High School.
Whiting—High School.

## IOWA.

**Albia**—High School.
**Algona**—High School.
**Audubon**—High School.
**Boone**—High School.
**Burlington**—High School.
**Carroll**—High School.
**Cedar Falls**—
  High School.
  Iowa State Teachers College, Training School.
**Cedar Rapids**—High School.
**Centerville**—High School.
**Charles City**—High School.
**Cherokee**—High School.
**Clarinda**—High School.
**Clinton**—High School.
**Corning**—High School.
**Corydon**—High School.
**Council Bluffs**—High School.
**Cresco**—High School.
**Creston**—High School.
**Davenport**—High School.
**Decorah**—High School.
**Denison**—High School.
**Des Moines**—
  East High School.
  North High School.
  West High School.
**Dubuque**—High School.
**Eagle Grove**—High School.
**Elkader**—High School.
**Fairfield**—High School.
**Fort Dodge**—High School.
**Fort Madison**—High School.
**Grinnell**—High School.
**Ida Grove**—High School.
**Independence**—High School.
**Indianola**—High School.
**Iowa City**—High School.
**Keokuk**—High School.
**Lemars**—High School.
**Logan**—High School.
**Manchester**—High School.
**Maquoketa**—High School.
**Marengo**—High School.
**Marshalltown**—High School.
**Mason City**—High School.
**Missouri Valley**—High School.
**Mount Pleasant**—High School.
**Muscatine**—High School.
**Newton**—High School.
**Osage**—High School.
**Onawa**—High School.
**Oskaloosa**—High School.
**Ottumwa**—High School.
**Red Oak**—High School.
**Rockwell City**—High School.
**Sac City**—High School.
**Sheldon**—High School.
**Sioux City**—High School.
**Spencer**—High School.
**Villisca**—High School.
**Vinton**—High School.
**Washington**—High School.
**Waterloo**—
  East High School.
  West High School.
**Waverly**—High School.
**West Liberty**—High School.

## KANSAS.

**Abilene**—High School.
**Alma**—High School.
**Anthony**—High School.
**Arkansas City**—High School.
**Atchison**—High School.
**Baldwin**—*Baker Academy.*
**Burlington**—High School.
**Chanute**—High School.
**Chapman**—Dickinson County High School.
**Cherokee**—Crawford County High School.
**Cherryvale**—High School.
**Clay Center**—Clay County High School.
**Coffeyville**—High School.
**Columbus**—Cherokee County High School.
**Concordia**—High School.
**Cottonwood Falls**—Chase County High School.
**Dodge City**—High School.
**Effingham**—Atchison County High School.
**El Dorado**—High School.
**Emporia**—
  High School.
  *Lewis Academy.*
**Eureka**—High School.
**Fort Scott**—High School.
**Garnett**—High School.
**Great Bend**—High School.
**Herington**—High School.
**Hiawatha**—High School.
**Holton**—High School.
**Horton**—High School.
**Humboldt**—High School.
**Hutchinson**—High School.
**Independence**—Montgomery County High School.
**Iola**—High School.
**Junction City**—High School.
**Kansas City**—
  High School.
  Sumner High School (colored).
**Kingman**—High School.
**Kinsley**—High School.
**Lawrence**—High School.
**Leavenworth**—High School.
**McPherson**—High School.
**Marion**—High School.
**Marysville**—High School.
**Minneapolis**—High School.
**Neodesha**—High School.
**Newton**—
  *Bethel Academy.*
  High School.
**Nickerson**—Reno County High School.
**Oberlin**—Decatur County High School.
**Olathe**—High School.
**Ottawa**—
  High School.
  *University Academy.*

Paola—High School.
Peabody—High School.
Pratt—High School.
Pittsburg—High School.
Sabetha—High School.
Salina—High School.
Seneca—High School.
Stafford—High School.
Sterling—High School.
Topeka—
    High School.
    *Washburn Academy.*
Wakeeny—Trego County High School.
Washington—High School.
Wellington—Sumner County High School.
Wichita—High School.
Winfield—High School.

## MICHIGAN.

Adrian—High School.
Albion—High School.
Alma—High School.
Alpena—High School.
Ann Arbor—High School.
Battle Creek—High School.
Bay City—
    East side—High School.
    West side—High School.
Benton Harbor—High School.
Bessemer—High School.
Big Rapids—
    *Ferris Institute.*
    High School.
Birmingham—High School.
Boyne City—High School.
Cadillac—High School.
Calumet—High School.
Charlevoix—High School.
Cheboygan—High School.
Charlotte—High School.
Coldwater—High School.
Crystal Falls—High School.
Detroit—
    Central High School.
    Eastern High School.
    Higgins High School.
    *Liggett School.*
    McMillan High School.
    *University School.*
    Western High School.
Dollar Bay—High School.
Dowagiac—High School.
Escanaba—High School.
Evarts—High School.
Flint—High School.
Fremont—High School.
Gladstone—High School.
Grand Rapids—
    Central High School.
    John Calvin, Jr., High School.
    Union High School.
Grand Haven—High School.
Greenville—High School.
Gwinn—High School.
Hancock—High School.
Hart—High School.
Hastings—High School.
Highland Park—High School.
Hillsdale—High School.
Holland—High School.
Houghton—High School.
Hudson—High School.
Iona—High School.
Iron Mountain—High School.
Ironwood—High School.
Ishpeming—High School.
Jackson—High School.
Kalamazoo—High School.
Lake Linden—High School.
Lansing—High School.
Lowell—High School.
Ludington—High School.
Manistee—High School.
Manistique—High School.
Marshall—High School.
Marquette—High School.
Mason—High School.
Menominee—High School.
Midland—High School.
Monroe—High School.
Muskegon—High School.
Mount Clemens—High School.
Mount Pleasant—High School.
Negaunee—High School.
Newberry—High School.
Niles—High School.
Norway—High School.
Ontonagon—High School.
Otsego—High School.
Owosso—High School.
Painesdale—High School.
Paw Paw—High School.
Petoskey—High School.
Pontiac—High School.
Port Huron—High School.
Portland—High School.
River Rouge—High School.
Saginaw—
    East side—High School.
    West side—High School.
Sault Ste. Marie—High School.
South Haven—High School.
St. Johns—High School.
St. Joseph—High School.
St. Louis—High School.
Sturgis—High School.
Three Rivers—High School.
Traverse City—High School.
Union City—High School.
Wakefield—High School.
Williamston—High School.
Wyandotte—High School.
Ypsilanti—High School.

## MINNESOTA.

Albert Lea—High School.
Alexandria—High School.
Anoka—High School.
Austin—High School.
Bemidji—High School.
Blue Earth—High School.
Brainerd—High School.
Canby—High School.
Chisholm—High School.
Cloquet—High School.
Coleraine—High School.
Crookston—High School.
Detroit—High School.
Duluth—Central High School.
East Grand Forks—High School.
Ely—High School.
Eveleth—High School.
Fairmont—High School.
Faribault—
  High School.
  *Shattuck Military Academy.*
Fergus Falls—High School.
Gilbert—High School.
Glencoe—High School.
Grand Rapids—High School.
Hastings—High School.
Hector—High School.
Hibbing—High School.
Hutchinson—High School.
Jackson—High School.
Lake City—High School.
Litchfield—High School.
Little Falls—High School.
Luverne—High School.
Mankato—High School.
Marshall—High School.
Minneapolis—
  Central High School.
  East High School.
Minneapolis—Continued.
  North High School.
  South High School.
  West High School.
Montevideo—High School.
Moorhead—High School.
Morris—High School.
New Ulm—High School.
Northfield—High School.
Owatonna—
  High School.
  *Pillsbury Academy.*
Pipestone—High School.
Red Wing—High School.
Redwood Falls—High School.
Rochester—High School.
St. Cloud—High School.
St. James—High School.
St. Paul—
  Central High School.
  Cleveland High School.
  Humboldt High School.
  John A. Johnson High School
  Mechanic Arts High School.
St. Peter—High School.
Sauk Center—High School.
Sleepy Eye—High School.
Spring Valley—High School.
Stillwater—High School.
Thief River Falls—High School.
Two Harbors—High School.
Virginia—High School.
Wadena—High School.
Waseca—High School.
Wells—High School.
Willmar—High School.
Windom—High School.
Winona—High School.
Worthington—High School.

## MISSOURI.

Boonville—*Kemper Military School.*
Butler—High School.
Cameron—High School.
Carrollton—High School.
Carthage—High School.
Chillicothe—High School.
Clayton—High School.
Columbia—
  *Christian College Academy.*
  High School.
  *Stephens College Academy.*
  University High School.
Fayette—High School.
Fredericktown—High School.
Fulton—
  High School.
  *Wm. Woods College Academy.*
Hannibal—High School.
Kansas City—
  Central High School.
  North East High School.
  Westport High School.
Kennett—High School.
Kirkwood—High School.
Lebanon—High School.
Lexington—
  High School.
  *Wentworth Military Academy.*
Maplewood—High School.
Maryville—High School.
Mexico—
  High School.
  *Hardin College Academy.*
Nevada—*Cottey College Academy.*
Paris—High School.
Poplar Bluff—High School.
St. Charles—
  High School.
  *Lindenwood College Academy*
St. Joseph—High School.
St. Louis—
  Central High School.
  *Forest Park College Academy*
  *Hosmer Hall.*

St. Louis—Continued.
  McKinley High School.
  *Manual Training School, Washington University.*
  *Mary Institute.*
  *Smith Academy.*
  Soldan High School.
  Sumner High School.
  Yeatman High School.
Savannah—High School.
Sedalia—High School.
Shelbina High School.
Slater—High School.
Trenton—High School.
Webb City—High School.
Webster Groves—High School.
Wellston—High School.

## MONTANA.

Anaconda—High School.
Billings—High School.
Butte—High School.
Bozeman—Gallatin County High School.
Bigtimber—Sweet Grass County High School.
Deer Lodge—Powell County High School.
Dillon—Beaverhead County High School.
Glendive—Dawson County High School.
Great Falls—High School.
Hamilton—High School.
Havre—High School.
Helena—High School.
Kalispell—Flathead County High School.
Lewistown—Fergus County High School.
Miles City—Custer County High School.
Missoula—County High School.

## NEBRASKA.

Alliance—High School.
Ashland—High School.
Auburn—High School.
Aurora—High School.
Beatrice—High School.
Blair—High School.
Columbia—High School.
Crete—
  *Doane Academy.*
  High School.
David City—High School.
Edgar—High School.
Fairbury—High School.
Fairmount—High School.
Falls City—High School.
Franklin—*Academy.*
Fremont—High School.
Friend—High School.
Fullerton—High School.
Grand Island—
  *Academy.*
  High School.
Hastings—
  *Academy.*
  High School.
Havelock—High School.
Hebron—High School.
Holdrege—High School.
Kearney—High School.
Lincoln—
  High School.
  *Nebraska Military Academy.*
Lincoln—Continued.
  Teachers' College High School, University of Nebraska.
McCook—High School.
Nebraska City—High School.
Neligh—High School.
Newman Grove—High School.
Norfolk—High School.
North Platte—High School.
Omaha—
  *Brownell Hall.*
  High School.
Osceola—High School.
Pawnee—High School.
Schuyler—High School.
Scottsbluff—High School.
Seward—High School.
Shelton—High School.
Sidney—High School.
South Omaha—High School.
Superior—High School.
Tecumseh—High School.
Tekamah—High School.
University Place—
  High School.
  *Nebraska Wesleyan Academy.*
Wahoo—High School.
Wayne—High School.
West Point—High School.
Wilber—High School.
York—High School.

## NORTH DAKOTA.

Agricultural College—Agricultural and Manual Training High School.
Beach—High School.
Bismarck—High School.
Bottineau—High School.
Cando—High School.
Carrington—High School.
Casselton—High School.
Devils Lake—High School.
Dickinson—High School.
Fargo—High School.
Grafton—High School.
Grand Forks—High School.
Hope—High School.
Jamestown—High School.
Kenmare—High School.
Lakota—High School.
La Moure—High School.
Langdon—High School.
Larimore—High School.
Lisbon—High School.
Mandan—High School.
Minot—High School.
New Rockford—High School.
Park River—High School.
University—Model High School.
Valley City—High School.
Wahpeton—High School.
Williston—High School.

## OHIO.

- Akron—
  - *Buchtel Academy.*
  - Central High School.
  - South High School.
- Alliance—High School.
- Ashland—High School
- Ashtabula—High School.
- Ashtabula Harbor—High School.
- Athens—High School.
- Barberton—High School.
- Bellaire—High School.
- Bellefontaine—High School.
- Bellevue—High School.
- Bluffton—High School.
- Bowling Green—High School.
- Bryan—High School.
- Bucyrus—High School.
- Cambridge—High School.
- Canal Dover—High School.
- Canton—High School.
- Celina—High School.
- Chardon—High School.
- Chicago Junction—High School.
- Chillicothe—High School.
- Cincinnati—
  - *College Preparatory School for Girls.*
  - *Franklin School.*
  - Hartwell High School.
  - Hughes High School.
  - Walnut Hills High School.
  - Woodward High School.
  - *University School.*
- Circleville—High School.
- Cleveland—
  - Central High School.
  - East High School.
  - East Technical High School.
  - Glenville High School.
  - Lincoln High School.
  - South High School.
  - West High School.
  - West Technical High School.
  - *University School.*
- Cleveland Heights—High School.
- College Hill—*Ohio Military Institute.*
- Columbus—
  - Clinton High School.
  - East High School.
  - North High School.
  - South High School.
  - *School for Girls.*
  - West High School.
- Conneaut—High School.
- Coshocton—High School.
- Cuyahoga Falls—High School.
- Dayton—
  - Steele High School.
  - *St. Mary's Institute.*
  - Stivers Manual Training High School.
- Defiance—High School.
- Delaware—High School.
- Delphos—High School.
- Dennison—High School.
- East Cleveland—High School.
- East Liverpool—High School.
- East Palestine—High School.
- Eaton—High School.
- Elyria—High School.
- Findlay—High School.
- Fostoria—High School.
- Fremont—High School.
- Galion—High School.
- Gallipolis—High School.
- Geneva—High School.
- Granville—*Doane Academy.*
- Greenfield—High School.
- Greenville—High School.
- Hamilton—High School.
- Hillsboro—High School.
- Ironton—High School.
- Jackson—High School.
- Jefferson—High School.
- Kent—High School.
- Kenton—High School.
- Lakewood—High School.
- Lancaster—High School.
- Lima—High School.
- Lisbon—High School.
- Lockland—High School.
- Logan—High School.
- London—High School.
- Lorain—High School.
- Madisonville—High School.
- Mansfield—High School.
- Marietta—High School.
- Marion—High School.
- Martins Ferry—High School.
- Marysville—High School.
- Massillon—High School.
- Madina—High School.
- Miamisburg—High School.
- Middletown—High School.
- Mount Vernon—High School.
- Napoleon—High School.
- Nelsonville—High School.
- Newark—High School.
- New Bremen—High School.
- New Concord—High School.
- New Lexington—High School.
- New Philadelphia—High School.
- Niles—High School.
- North Baltimore—High School.
- Norwalk—High School.
- Norwood—High School.
- Oberlin—
  - *Academy.*
  - High School.
- Orrville—High School.
- Painesville—High School.
- Piqua—High School.
- Plain City—High School
- Pomeroy—High School.
- Port Clinton—High School.
- Portsmouth—High School.
- Ravenna—High School.
- Reily—High School (Township).
- Salem—High School.
- Sandusky—High School.
- Shelby—High School.
- Springfield—High School.
- Sidney—High School.
- Steubenville—High School.

Saint Marys—High School.
Tiffin—High School.
Tippecanoe City—High School.
Toledo—
    Central High School.
    Scott High School.
    *Smead School.*
Troy—High School.
Uhrichsville—High School.
Upper Sandusky—High School.
    High School.
    *University School.*
    Urbana—
Van Wert—High School.
Wadsworth—High School.
Wapakoneta—High School.
Warren—High School.
Washington—High School.
Wauseon—High School.
Wellston—High School.
Wellsville—High School.
Westerville—High School.
West Jefferson—High School.
Willoughby—High School.
Wilmington—High School.
Wooster—
    *Academy.*
    High School.
Wyoming—High School.
Xenia—High School.
Youngstown—
    Rayen High School.
    South High School.
Zanesville—High School.

## OKLAHOMA.

Anadarko—High School.
Ardmore—High School.
Bartlesville—High School.
Blackwell—High School.
Chickasha—High School.
El Reno—High School.
Enid—
    High School.
    *Phillips University High School.*
Guthrie—High School.
Hugo—High School.
Lawton—High School.
McAlester—High School.
Muskogee—High School.
Okmulgee—High School.
Oklahoma—High School.
Sapulpa—High School.
Shawnee—High School.
Tonkawa—University Preparatory School.
Tulsa—High School.
Vinita—High School.
Wagoner—High School.

## SOUTH DAKOTA.

Aberdeen—High School.
Brookings—High School.
Canton—High School.
Deadwood—High School.
Flandreau—High School.
Huron—High School.
Lead—High School.
Madison—High School.
Miller—High School.
Mitchell—High School.
Pierre—High School.
Rapid City—High School.
Redfield—High School.
Sioux Falls—
    *All Saints School.*
    High School.
Vermilion—High School.
Watertown—High School.
Webster—High School.
Yankton—High School.

## WISCONSIN.

Antigo—High School.
Appleton—High School.
Ashland—High School.
Baraboo—High School.
Beaver Dam—
    High School.
    *Wayland Academy.*
Beloit—High School.
Berlin—High School.
Boscobel—High School.
Burlington—High School.
Chippewa Falls—High School.
Columbus—High School.
Delafield—*St. John's Military Academy.*
Delavan—High School.
Dodgeville—High School.
Eau Claire—High School.
Edgerton—High School.
Elkhorn—High School.
Ellsworth—High School.
Elroy—High School.
Evansville—High School.
Fennimore—High School.
Fond du Lac—High School.
Fort Atkinson—High School.
Grand Rapids—High School.
Green Bay—
    (East)—High School.
    (West)—High School.
Hartford—High School.
Hudson—High School.
Janesville—High School.
Kaukauna—High School.
Kenosha—High School.
La Crosse—High School.
Lake Geneva—High School.

Lancaster—High School.
Lodi—High School.
Madison—
  High School.
  Wisconsin High School.
Manitowoc—High School.
Marinette—High School.
Marshfield—High School.
Medford—High School.
Menasha—High School.
Menomonie—High School.
Merrill—High School.
Milwaukee—
  (East)—High School.
  (North)—High School.
  (South)—High School.
  (West)—High School.
  *Milwaukee-Downer Seminary.*
Mineral Point—High School.
Monroe—High School.
Neenah—High School.
Neillsville—High School.
New London—High School.
New Richmond—High School.
Oconomowoc—High School.
Oconto—High School.
Oshkosh—High School.
Platteville—High School.
Plymouth—High School.
Portage—High School.
Racine—
  College Grammar School.
  High School.
Reedsburg—High School.
Rhinelander—High School.
Rice Lake—High School.
Richland Center—High School.
Ripon—High School.
River Falls—High School.
Sheboygan—High School.
Sinsinawa—*St. Clara Academy.*
South Milwaukee—High School.
Sparta—High School.
Stanley—High School.
Stoughton—High School.
Sturgeon Bay—High School.
Superior—
  Central High School.
  Nelson Dewey High School.
Tomah—High School.
Washburn—High School.
Watertown—High School.
Waukesha—High School.
Waupaca—High School.
Waupun—High School.
Wausau—High School.
Wauwatosa—High School.
West Allis—High School.
West Bend—High School.
Whitewater—High School.

## WYOMING.

Cheyenne—High School.
Laramie—High School.
Sheridan—High School.

# PART III.—LISTS OF CERTAIN PRIVATE INSTITUTIONS.

## Schools in Washington, D. C., Accredited by George Washington University, October 13, 1914.

| | Units. |
|---|---|
| Admission requirements | 15 |
| Prescribed units: | |
| English | 3 |
| Mathematics | 2½ |
| Foreign languages | 2 |
| Electives | 7½ |

*Army and Navy Preparatory School.*
*Bristol School.*
Central High School.
*Chevy Chase Seminary.*
Eastern High School.
*Emerson Institute.*
*Fairmont Seminary.*
*Friends' Select School.*
*Gunston Hall.*
*Hall-Noyes School.*
*Holton-Arms School.*
*Madeira School for Girls.*
Manual Training High School.
*Martha Washington Seminary.*
M Street High School.
*Mount Vernon Seminary.*
*Misses Eastman's School.*
*National Cathedral School for Boys.*
*National Cathedral School for Girls.*
*Washington Collegiate School.*
*Washington College.*
*Washington Seminary.*
Western High School.

## Schools Affiliated with the Catholic University of America, June, 1914.

| | Units. |
|---|---|
| Admission requirements | 15 |
| Prescribed units: | |
| Religion | 2 |
| English | 3 |
| Some other language | 2 |
| Mathematics | 2 |
| Social science (including history) | 1 |
| Natural science | 1 |
| Electives (must be selected in such a way as to give another course besides English of 3 units) | 4 |

- Alabama:
  - Birmingham—*Blessed Sacrament Academy.*
- California:
  - San Francisco—*Notre Dame College Academy.*
  - San Jose—
    - *College of Notre Dame, Secondary Department.*
    - *Notre Dame High School.*
- Colorado:
  - Denver—*St. Mary's Academy.*
  - Loretto—*Loretto Heights Academy.*
- Connecticut:
  - Waterbury—*Notre Dame Academy.*
- Georgia:
  - Atlanta—*Marist College, High School Department.*
  - Augusta—*Mount St. Joseph.*
- Illinois:
  - Chicago—
    - *Our Lady of Lourdes High School.*
    - *St. Mary's High School.*
  - Evanston—*Visitation Academy.*
- Indiana:
  - St. Mary's—*St. Mary-of-the-Woods.*
- Iowa:
  - Dubuque—*St. Joseph's College and Academy.*
- Kentucky:
  - Loretto—*Loretto Academy.*
  - Newport—
    - *Academy of Notre Dame of Providence.*
    - *Mount St. Martin's Convent.*
- Massachusetts:
  - Arlington Heights—*Marycliff Academy.*
  - Boston—*Boston Academy of Notre Dame.*
  - Lowell—*Notre Dame Academy.*
  - Roxbury—*Notre Dame Academy.*
- Michigan:
  - Ironwood—*St. Ambrose High School.*
  - Monroe—*St. Mary's College and Academy.*
- Minnesota:
  - Duluth—*Villa Sancta Scholastica.*
  - St. Joseph—*St. Benedict's College and Academy.*
- Missouri:
  - Kansas City—*Loretto Academy.*
  - St. Louis—*St. Joseph's Academy.*
- New York:
  - Buffalo—*Mary Immaculate Academy.*
  - Lockport—*St. Joseph's Academy.*
  - Tarrytown—*Marymount.*
- Ohio:
  - Cincinnati—
    - *Mount St. Vincent Academy.*
    - *Mount Notre Dame Academy.*
    - *Notre Dame Academy* (Court and Mound Streets).
    - *Notre Dame Academy* (East Sixth Street).
    - *Notre Dame Academy* (Grandin Road).
    - *Our Lady of Mercy Academy.*
    - *St. Mary's High School.*
    - *St. Ursula's Academy.*
  - Cleveland—*Ursuline Academy.*
  - Columbus—*St. Joseph's Academy.*
  - Dayton—*Notre Dame Academy.*
  - Hamilton—*Notre Dame Academy.*
  - Maria Stein—*Mother House, Sisters of the Precious Blood.*
  - Nottingham—*Ursuline Academy, Villa Angela.*
  - St. Joseph—*Mount St. Joseph-on-the-Ohio.*
  - Toledo—
    - *St. Francis de Sales Cathedral High School.*
    - *Ursuline Academy.*
- Oregon:
  - Portland—*St. Mary's Academy.*
- Pennsylvania:
  - Greensburg—*St. Joseph's Academy.*
  - Philadelphia—
    - *Academy of Notre Dame.*
    - *Mount St. Joseph Convent.*
  - Pittsburgh—*Holy Rosary School.*
  - Scranton—*Mount St. Mary's Seminary.*
  - Wilkes-Barre—*St. Mary's High School.*
- Tennessee:
  - Nashville—*St. Bernard Academy.*
- Texas:
  - Dallas—
    - *Our Lady of Good Counsel Academy.*
    - *St. Edward's Academy.*
  - Denison—*St. Xavier's Academy.*
  - Fort Worth—
    - *Our Lady of Victory College and Academy.*
    - *St. Ignatius Academy.*
  - San Antonio—
    - *College and Academy of the Incarnate Word.*
    - *Our Lady of the Lake.*
  - Sherman—*St. Joseph's Academy.*
  - Waco—*Sacred Heart Academy.*
  - Wichita Falls—*Mary Immaculate Academy.*
- Washington:
  - Tacoma—*Aquinas Academy.*
- Wisconsin:
  - Green Bay—*St. Joseph Academy.*
  - Milwaukee—
    - *Holy Angels Academy.*
    - *St. John's Cathedral High School.*
  - Sinsinawa—*St. Clara College and Academy.*

## Accredited by the University of Chicago, Chicago, Ill., June, 1914.

| | Units. |
|---|---|
| Admission requirements | 15 |
| Prescribed units: | |
| English | 3 |
| Selected from the following subjects: Latin, Greek, modern language, history, mathematics, science | 7 |
| Electives | 5 |

- Alabama:
  - Birmingham—High School.
  - Mobile—High School.
  - Montgomery—Girls' High School.
- Arkansas:
  - Fort Smith—High School.
  - Hot Springs—High School.
  - Little Rock—High School.
- California:
  - Los Angeles—High School.
  - Pasadena—High School.
  - San Francisco—
    - Girls' High School.
    - Lowell High School.
- Colorado:
  - Colorado Springs—High School.
  - Denver—
    - East Side High School.
    - North Side High School.
    - West Side High School.
  - Leadville—High School.
  - Pueblo—
    - Centennial High School.
    - Central High School.
- Georgia:
  - Atlanta—Girls' High School.
- Idaho:
  - Pocatello—High School.
- Illinois:
  - Aledo—*Drury Academy.*
  - Alton—High School.
  - Atlanta—High School.
  - Auburn—High School.
  - Aurora—
    - East Side High School.
    - *Jennings Seminary.*
    - West Side High School.
  - Beardstown—High School.
  - Belvidere—
    - Main Street High School.
    - South Belvidere High School.
  - Bloomington—High School.
  - Blue Island—High School.
  - Cairo—High School.
  - Carthage—
    - *Carthage College Academy.*
    - High School.
  - Centralia—Township High School.
  - Charleston—High School.
  - Chicago—
    - Austin High School.
    - Bowen High School.
    - Calumet High School.
    - Carl Schurz High School.
    - Crane Technical High School.
    - Curtis High School.
    - Englewood High School.
    - *Faulkner School.*
    - Carter Harrison Technical High School.
    - Hyde Park High School.

- Illinois—Continued.
  - Chicago—Continued.
    - *Kenwood Institute*
    - Lake High School.
    - Lake View High School.
    - Lane Technical High School.
    - Marshall High School.
    - McKinley High School.
    - Medill High School.
    - Morgan Park High School.
    - *Francis W. Parker School.*
    - *Starrett School for Girls.*
    - *St. James High School.*
    - Tuley High School.
    - *University High School.*
    - *University School for Boys.*
    - Waller High School.
    - Wendell Phillips High School.
    - *Y. M. C. A. Institute.*
  - Chicago Heights—Bloom Township High School.
  - Clinton—High School.
  - Clyde—High School.
  - Danville—High School.
  - Decatur—High School.
  - DeKalb—
    - High School.
    - Northern Illinois State Normal School.
  - Des Plaines—Township High School.
  - Dixon—
    - North Side High School.
    - South Side High School.
  - Du Quoin—Township High School.
  - East St. Louis—High School.
  - Elgin—
    - *Elgin Academy.*
    - High School.
  - Evanston—Township High School.
  - Freeport—High School.
  - Galesburg—High School.
  - Galva—High School.
  - Geneseo—Township High School.
  - Geneva—High School.
  - Godfrey—*Monticello Seminary.*
  - Harrisburg—Township High School.
  - Harvard—High School.
  - Harvey—Thornton Township High School.
  - Havana—High School.
  - Highland Park—Deerfield Township High School.
  - Hinsdale—High School.
  - Hoopeston—High School.
  - Jacksonville—
    - High School.
    - *Illinois Woman's College, Academy.*
  - Joliet—Township High School.
  - Kankakee—High School.
  - Kenilworth—New Trier Township High School.
  - Kewanee—High School.

Illinois—Continued.
- La Grange—Lyons Township High School.
- Lake Forest—
  - *Lake Forest School for Boys.*
  - *Ferry Hall.*
- La Salle—Peru Township High School.
- Lexington—High School.
- Lincoln—High School.
- Lockport—Township High School.
- Macomb—
  - High School.
  - *Western Illinois Normal School Academy.*
- Marshall—High School.
- Mattoon—High School.
- Maywood—Proviso Township High School.
- Mendota—High School.
- Moline—High School.
- Monmouth—High School.
- Morgan Park—*Morgan Park Academy.*
- Morris—High School.
- Morrison—High School.
- Mount Vernon—Township High School.
- Murphysboro—Murphysboro Township High School.
- Normal—High School.
- Oak Park—Oak Park and River Forest Township High School.
- Ottawa—Township High School.
- Paris—High School.
- Pekin—High School.
- Peoria—
  - Central High School.
  - Manual Training High School.
- Polo—High School.
- Pontiac—Township High School.
- Princeton—Township High School.
- Quincy—High School.
- Riverside—High School.
- Robinson—Township High School.
- Rochelle—High School.
- Rockford—High School.
- Rock Island—High School.
- Roseville—High School.
- St. Charles—High School.
- Springfield—High School.
- Sterling—High School.
- Streator—Township High School.
- Sullivan—High School.
- Sycamore—
  - High School.
  - *Waterman Hall.*
- Taylorville—High School.
- Tuscola—High School.
- Waukegan—Township High School.
- West Chicago—High School.
- Upper Alton—*Western Military Academy.*
- Wheaton—High School.
- Woodstock—High School.

Indiana:
- Anderson—High School.
- Attica—High School.
- Auburn—High School.
- Bedford—High School.
- Columbia City—High School.
- Connersville—
  - High School.
  - *Elmhurst School for Girls.*
- Crawfordsville—High School.

Indiana—Continued.
- Crown Point—High School.
- East Chicago—High School.
- Elkhart—High School.
- Evansville—High School.
- Fort Wayne—High School.
- Frankfort—High School.
- Franklin—High School.
- Goshen—High School.
- Hammond—High School.
- Hartford City—High School.
- Huntington—High School.
- Indianapolis—
  - Manual Training High School.
  - Shortridge High School.
  - *Tudor Hall School for Girls.*
- Kokomo—High School.
- Lafayette—High School.
- La Porte—High School.
- Lebanon—High School.
- Ligonier—High School.
- Logansport—High School.
- Marion—High School.
- Michigan City—High School.
- Mishawaka—High School.
- Muncie—High School.
- New Albany—High School.
- New Castle—High School.
- Noblesville—High School.
- North Manchester—High School.
- Notre Dame—*St. Mary's Academy.*
- Plymouth—High School.
- Rensselaer—High School.
- Richmond—High School.
- Rochester—High School.
- Rushville—High School.
- Salem—High School.
- Shelbyville—High School.
- Sheridan—High School.
- South Bend—High School.
- Terre Haute—
  - High School.
  - Garfield High School.
  - State Normal School, High School section.
- Union City—High School.
- Valparaiso—High School.
- Vincennes—High School.
- Wabash—High School.
- Warsaw—High School.
- Washington—High School.
- Whiting—High School.
- Winona Lake—*Winona Park School for Girls.*

Iowa:
- Boone—High School.
- Burlington—High School.
- Carroll—High School.
- Cedar Rapids—High School.
- Clarinda—High School.
- Clinton—High School.
- Council Bluffs—High School.
- Creston—High School.
- Davenport—
  - High School.
  - *St. Katherine's Hall.*
- Des Moines—
  - East Side High School.
  - North Side High School.
  - West Side High School.

Iowa—Continued.
- Dubuque—High School.
- Fort Dodge—High School.
- Glenwood—High School.
- Grinnell—High School.
- Independence—High School.
- Iowa City—High School.
- Keokuk—High School.
- Maquoketa—High School.
- Marengo—High School.
- Marshalltown—High School.
- Mason City—High School.
- Muscatine—High School.
- Newton—High School.
- Oskaloosa—High School.
- Ottumwa—High School.
- Red Oak—High School.
- Sioux City—High School.
- Vinton—High School.
- Washington—High School.
- Waterloo—East Side High School.
- West Waterloo—High School.
- West Liberty—High School.

Kansas:
- Abilene—High School.
- Atchison—High School.
- Chanute—High School.
- Columbus—Cherokee County High School.
- Clay Center—High School.
- Coffeyville—High School.
- Emporia—High School.
- Fort Scott—High School.
- Hiawatha—High School.
- Hutchinson—High School.
- Iola—High School.
- Junction City—High School.
- Kansas City—
  - High School.
  - Sumner High School.
- Lawrence—High School.
- Leavenworth—High School.
- McPherson—High School.
- Topeka—High School.
- Wichita—High School.
- Winfield—High School.

Kentucky:
- Louisville—
  - Boys' High School.
  - Girls' High School.
  - Manual Training High School.
  - *Semple Collegiate High School.*
  - Moore Primary School.
- Owensboro—High School.
- Paducah—High School.

Louisiana:
- Monroe—High School.

Maine:
- Waterville—*Coburn Classical Institute.*

Michigan:
- Battle Creek—High School.
- Bay City—
  - High School.
  - Western High School.
- Benton Harbor—High School.
- Cadillac—High School.
- Calumet—High School.
- Coldwater—High School.

Michigan—Continued.
- Detroit—
  - Central High School.
  - *Detroit Home and Day School.*
  - Eastern High School.
  - Western High School.
- Escanaba—High School.
- Flint—High School.
- Grand Rapids—Central High School.
- Ishpeming—High School.
- Jackson—High School.
- Kalamazoo—High School.
- Lake Linden—High School.
- Marquette—High School.
- Menominee—High School.
- Muskegon—Manual Training High School.
- Orchard Lake—*Michigan Military Academy.*
- Petoskey—High School.
- Saginaw—
  - East Side High School.
  - West Side High School.
- St. Joseph—High School.
- Sturgis—High School.

Mississippi:
- Laurel—High School.

Minnesota:
- Albert Lea—High School.
- Coleraine—High School.
- Duluth—High School.
- Eveleth—High School.
- Faribault—
  - *St. Mary's Hall.*
  - *The Shattuck School.*
- Hibbing—High School.
- Marshall—State High School.
- Minneapolis—
  - Central High School.
  - East Side High School.
  - North Side High School.
  - South Side High School.
  - West Side High School.
- Owatonna—*Pillsbury Academy.*
- Rochester—High School.
- St. Paul—
  - Central High School.
  - Humboldt Park High School.
  - John A. Johnson High School.
  - *St. Catherine's College.*
- Winona—High School.

Missouri:
- Carrollton—High School.
- Chillicothe—High School.
- Kansas City—
  - Central High School.
  - Manual Training High School.
  - Westport High School.
- St. Joseph—High School.
- St. Louis—
  - Central High School.
  - *College Preparatory of Forest Park University.*
  - Hosmer High School.
  - *Mary Institute.*
  - McKinley High School.
  - *Smith Academy.*
  - Soldan High School.
  - Yeatman High School.

**Montana:**
- Anaconda—High School.
- Billings—High School.
- Bozeman—Gallatin County High School.
- Butte—High School.
- Great Falls—High School.
- Helena—High School.

**Nebraska:**
- Beatrice—High School.
- Fremont—High School.
- Holdredge—High School.
- Kearney—
  - High School.
  - State Normal School.
- Lincoln—High School.
- Omaha—
  - *Brownell Hall.*
  - High School.
- South Omaha—High School.

**New York:**
- Buffalo—Masten Park High School.

**Ohio:**
- Akron—
  - Central High School.
  - South High School.
- Ashtabula—High School.
- Canton—High School.
- Cincinnati—
  - Hughes High School.
  - Madisonville High School.
  - Walnut Hills High School.
  - Woodward High School.
- Cleveland—
  - Central High School.
  - East Side High School.
  - East Technical High School.
  - Glenville High School.
  - Lincoln High School.
  - South Side High School.
  - West Side High School.
  - *University School.*
- Columbus—
  - Central High School.
  - East Side High School.
  - North Side High School.
  - South Side High School.
- Dayton—
  - Steele High School.
  - Stivers Manual Training High School.
- East Cleveland—Shaw High School.
- Elyria—High School.
- Findlay—High School.
- Fostoria—High School.
- Granville—*Doane Academy.*
- Hamilton—High School.
- Lima—High School.
- Middletown—High School.
- Napoleon—High School.
- Newark—High School.
- Oberlin—High School.
- Painesville—High School.
- Sandusky—High School.
- Tiffin—High School.
- Toledo—
  - Scott High School.
  - Central High School.
- Youngstown—
  - High School.
  - South High School.

**Oklahoma:**
- Ardmore—High School.
- Enid—High School.
- Guthrie—High School.
- McAlester—High School.
- Muskogee—High School.
- Oklahoma—High School.
- Shawnee—High School.
- Tonkawa—Oklahoma University Preparatory School.
- Tulsa—High School.

**Pennsylvania:**
- Harrisburg—High School.
- Pittsburgh—Central High School.
- Westtown—*Westtown Boarding School.*

**North Dakota:**
- Grafton—High School.

**South Dakota:**
- Aberdeen—High School.
- Lead—High School.

**Tennessee:**
- Bell Buckle—*The Webb School.*
- Lebanon—*Castle Heights School.*
- Memphis—*University School.*
- Pulaski—*Massey School.*

**Utah:**
- Ogden—High School.

**Texas:**
- Amarillo—High School.
- Austin—High School.
- Beaumont—High School.
- Dallas—High School.
- Denison—High School.
- El Paso—High School.
- Fort Worth—High School.
- Galveston—High School.
- Hillsboro—High School.
- Houston—High School.
- San Antonio—High School.
- Sherman—High School.
- Waco—High School.

**Washington:**
- Reardan—High School.
- Seattle—High School.
- Spokane—High School.

**Wisconsin:**
- Appleton—Ryan High School.
- Beloit—High School.
- Berlin—High School.
- Black River Falls—High School.
- Chippewa Falls—High School.
- Delafield—*St. John's Military Academy.*
- Eau Claire—High School.
- Elkhorn—High School.
- Fond du Lac—High School.
- Grand Rapids—High School.
- Hillside—*Hillside Home School.*
- Janesville—High School.
- Kenosha—High School.
- La Crosse—High School.
- Lake Geneva—High School.
- Manitowoc—North Side High School.
- Marshfield—High School.
- Milwaukee—
  - East Division High School.
  - South Division High School.
  - West Division High School.
  - *Milwaukee-Downer Seminary.*

Wisconsin—Continued.
- Neillsville—High School.
- Oconomowoc—High School.
- Oshkosh—High School.
- Racine—High School.
- Sheboygan—High School.
- Stoughton—High School.
- Sturgeon Bay—High School.

Wisconsin—Continued.
- Superior—
  - Blaine High School.
  - Nelson-Dewey High School.
- Waukesha—
  - *Carroll College, Preparatory Department.*
  - High School.
- Waupaca—High School.

## Affiliated with Tulane University of Louisiana, October 1, 1914.

| | Units. |
|---|---|
| Entrance requirements | 14½ |
| Prescribed units: | |
| English | 3 |
| Mathematics | 3 |
| Foreign language | 2 |
| Latin | 3 |
| Greek or science (1) and history (1) | 2 |
| Electives | 1½ |

Alabama:
- Birmingham—City High School.
- Gadsden—High School.
- Marion—*Military Institute.*
- Mobile—
  - High School.
  - *University Military School.*
- Montgomery—*University School.*

Arkansas:
- Hope—High School.
- Magnolia—High School.
- Pine Bluff—High School.

Florida:
- Pensacola—High School.

Georgia:
- Columbus—High School.

Louisiana:
- Abbeville—High School.
- Alexandria—High School.
- Arcadia—High School.
- Bastrop—High School.
- Baton Rouge—High School.
- Bienville—High School.
- Brusly—High School.
- Crowley—High School.
- Donaldsonville—High School.
- Franklin—High School.
- Gibsland—High School.
- Hammond—High School.
- Homer—High School.
- Houma—
  - High School.
  - *Lorton Preparatory School.*
- Jennings—High School.
- Lake Charles—High School.
- Marksville—High School.
- Minden—Graded High School.
- Monroe—
  - City High School.
  - Ouachita Parish High School.

Louisiana—Continued.
- Napoleonville—High School.
- New Iberia—High School.
- New Orleans—
  - *Chenet Institute.*
  - *L. C. Ferrell's School for Boys.*
  - *Isidore Newman Manual Training High School.*
  - *Rugby Academy.*
  - *St. Aloysius College.*
  - Warren Easton High School.
- Opelousas—High School.
- St. Martinsville—High School.
- Shreveport—High School.
- Tallulah—High School.
- Vidalia—High School.
- Washington—High School.

Mississippi:
- Como—High School.
- Laurel—High School.
- Meridian—High School.
- Natchez—High School.
- Washington—*Jefferson Military College.*

Tennessee:
- Lebanon—Castle Heights High School.
- Martin—*McFerrin Training School.*
- Memphis—High School.

Texas:
- Beaumont—High School.
- Bryan—*Allen Academy.*
- Dallas—High School.
- Denton—High School.
- Dublin—High School.
- Ennis—High School.
- Fort Worth—High School.
- Houston—High School.
- San Antonio—High School.
- Sherman—High School.
- Victoria—High School.
- Waco—High School.

## Accredited by Johns Hopkins University, Baltimore, Md., June, 1914.

Entrance to Johns Hopkins University is usually by examination, but "applicants are received without examination from certain schools in or near the city of Baltimore which have been approved by the board of collegiate studies, provided their 'applications' fully and satisfactorily cover the requirements for admission. In the case of other schools, and in the case of candidates from approved schools whose cer-

**tificates are not fully satisfactory, examinations are required, either upon all the subjects necessary for matriculation or upon selected portions of these subjects, at the discretion of the committee on admission."**

Baltimore—
  *Boys' Latin School.*
  City College.
  *Friends' School.*
  *Jefferson School.*
  *Park School.*

Baltimore—Continued.
  Polytechnic Institute.
  *University School for Boys.*
Roland Park—*Gilman Country School.*
Port Deposit—*Jacob Tome Institute.*

## Schools in Maryland Accredited by St. John's College, Oct., 1914.

| | Units. |
|---|---|
| Entrance requirements | 14 |
| Prescribed units: | |
| Latin | 4 |
| English | 3 |
| Mathematics | 3 |
| History | 2 |
| Greek | [1]2 |
| Electives | [2]2 |

Annapolis—High School.
Baltimore—
  City College.
  *Boys' Latin School.*
  *Deichman School for Boys.*
  *University School for Boys.*
Bel Air—High School.
Cambridge—High School.
Centreville—High School.
Charlotte Hall—*Academy.*
Chestertown—High School.
Crisfield—High School.
Cumberland—High School.
Denton—High School.
Easton—High School.
Elkton—High School.
Ellicott City—High School.
Frederick—High School.
Hagerstown—High School.
Havre de Grace—High School.
Laurel—High School.
Lonaconing—High School.
Middletown—High School.
Millersville—*Anne Arundel Academy.*
Oakland—High School.
Port Deposit—*Jacob Tome Institute.*
Pocomoke City—High School.
Reisterstown—High School.
Rockville—
  *Academy.*
  High School.
Roland Park—*Gilman Country School.*
Salisbury—High School.
Towson—High School.
Westminster—High School.

## Schools Outside of New England Accredited by Mount Holyoke College, Oct. 3, 1914.

**(The schools accredited by Mount Holyoke in New England are those of the New England College Entrance Certificate Board.)**

| | Units. |
|---|---|
| Admission requirements | 15 |
| Prescribed units: | |
| English | 3 |
| Mathematics | 3 |
| History | 1 |
| Latin | 4 |
| Electives | 4 |

Alabama:
  Montgomery—Lanier High School.
California:
  Claremont—High School.
  Fowler—Union High School.
  Los Angeles—*Marlborough School.*
  Palo Alto—*Castilleja School.*
  Pasadena—High School.
  Redlands—High School.
  Riverside—Girls' High School.
  San Jose—High School.
Colorado:
  Boulder—State Preparatory School.
  Denver—East Side High School.
District of Columbia:
  Washington—
    Central High School.
    Eastern High School.
    M Street High School.
    *National Cathedral School for Girls.*
    Western High School.
Georgia:
  Athens—*Lucy Cobb Institute.*
  Atlanta—*Washington Seminary.*
  Columbus—High School.
Illinois:
  Alton—High School.
  Champaign—High School.

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[1] For classical course.

[2] For Latin-scientific course.

Illinois—Continued.
    Chicago—
        Calumet High School.
        *The Faulkner School.*
        Hyde Park High School.
        Lake View High School.
        Marshall High School.
        Parker High School.
        *University High School.*
        *University School for Girls.*
    Chicago Heights—High School (Township).
    Elgin—*Academy.*
    Evanston—
        *Academy.*
        High School (Township).
    Freeport—High School.
    Galesburg—High School.
    Godfrey—*Monticello Seminary.*
    Hinsdale—High School.
    Jacksonville—*Whipple Academy.*
    La Grange—High School (Township).
    Lake Forest—*Ferry Hall.*
    Mount Carroll—*Frances Shimer School.*
    Oak Park—High School (Township).
    Peoria—*Bradley Polytechnic Institute.*
    Waukegan—High School (Township).
    Winnetka—*The Girton School.*
Indiana:
    Crawfordsville—High School.
    Indianapolis—Shortridge High School.
    La Porte—High School.
    Princeton—High School.
Iowa:
    Alton—High School.
    Des Moines—North High School.
    Maquoketa—High School.
Kansas:
    Kansas City—High School.
    Wichita—High School.
Kentucky:
    Danville—*Kentucky College for Women.*
    Henderson—Barret Manual Training High School.
    Lexington—*Hamilton (Junior) College for Women.*
    Louisville—Girls' High School.
Maryland.
    Baltimore—
        *Girls' Latin School.*
        Western High School.
    Catonsville—*St. Timothy's School.*
    Frederick—*Women's College, Preparatory Department.*
Michigan:
    Detroit—
        Central High School.
        Eastern High School.
        *Liggett School.*
    Grand Rapids—Central High School.
    Houghton—High School.
    Jackson—High School.
    Muskegon—High School.
Minnesota:
    Bemidji—High School.
    Duluth—Central High School.
Minnesota—Continued.
    Minneapolis—
        Central High School.
        *Stanley Hall.*
    Willmar—High School.
    Winona—High School.
Missouri:
    Carthage—High School.
    St. Louis—Central High School.
Montana:
    Butte—High School.
Nebraska:
    Omaha—High School.
New Jersey:
    Asbury Park—High School.
    Bayonne—High School.
    Bernardsville—High School.
    Blairstown—*Blair Academy.*
    Bloomfield—High School.
    Bridgeton—
        High School.
        *Ivy Hall.*
    Burlington—*St. Mary's Hall.*
    Butler—High School.
    Cape May City—High School.
    Cranford—High School.
    Dover—High School.
    East Orange—High School.
    Elizabeth—Battin High School.
    Englewood —High School.
    Flemington—High School.
    Glen Ridge—High School.
    Gloucester City—High School.
    Hackensack—High School.
    Hackettstown—*Centenary Collegiate Institute.*
    Hamburg—Hardyston High School.
    Jersey City—Dickinson High School.
    Lakewood—*School for Girls.*
    Lambertville—High School.
    Matawan—High School.
    Millville—High School.
    Montclair—High School.
    Morristown—High School.
    Newark—Barringer High School.
    New Brunswick—*The Misses Anable's School.*
    Nutley—High School.
    Park Ridge—High School.
    Passaic—High School.
    Paterson—
        High School.
        *Hoover School.*
    Plainfield—
        High School.
        North Plainfield High School.
    Red Bank—*Shrewsbury Academy.*
    Ridgewood—High School.
    Rockaway—High School.
    Roselle Park—High School.
    Rutherford—High School.
    South Orange—*Columbia High School.*
    Summit—High School.
    Trenton—State Model High School.
    Westfield—High School.
    West Orange—High School.
    Wildwood—High School.

- New York:
  - Akron—High School.
  - Albany—
    - *Academy for Girls.*
    - High School.
  - Albion—High School.
  - Almond—High School.
  - Amsterdam—High School.
  - Attica—High School.
  - Auburn—Academic High School.
  - Aurora—*Wallcourt.*
  - Binghamton—*Lady Jane Grey School.*
  - Boonville—High School.
  - Bronxville—*Brantwood Hall.*
  - Brooklyn—
    - *Brooklyn Heights Seminary.*
    - Erasumus Hall High School.
    - Girls' High School.
    - Manual Training High School.
    - *Packer Collegiate Institute.*
  - Buffalo—
    - *Buffalo Seminary.*
    - Lafayette High School.
    - Masten Park High School.
  - Camden—High School.
  - Canajoharie—High School.
  - Carnel—*Drew Seminary.*
  - Catskill—High School.
  - Cazenovia—*Cazenovia Seminary.*
  - Cohoes—Egberts High School.
  - Dansville—High School.
  - Delevan—High School.
  - East Hampton—High School.
  - Fairport—High School.
  - Flushing—High School.
  - Forestville—High School.
  - Fredonia—State Normal School.
  - Geneva—High School.
  - Glenns Falls—High School.
  - Gloversville—High School.
  - Goshen—High School.
  - Gouverneur—High School.
  - Greenwich—High School.
  - Hamilton—High School.
  - Hancock—High School.
  - Hornell—High School.
  - Hudson—High School.
  - Ithaca—High School.
  - Jamaica—High School.
  - Jamestown—High School.
  - Kingston—*Kingston Academy.*
  - Locust Valley—*Friends' Academy.*
  - Lowville—*Lowville Academy.*
  - Mechanicsville—High School.
  - Mexico—Academy and High School.
  - Middletown—High School.
  - Mount Kisco—High School.
  - Mount Vernon—High School.
  - New Brighton—Curtis High School.
  - Newburgh—Free Academy.
  - New Hartford—High School.
  - New Paltz—High School.
  - Newport—High School.
  - New Rochelle—High School.
  - New York—
    - *Barnard School for Girls.*
    - Wadleigh High School.
    - Washington Irving High School.
- New York—Continued.
  - Norwich—High School.
  - Oneonta—High School.
  - Oxford—Academy.
  - Patchogue—High School
  - Pittsford—High School.
  - Poughkeepsie—
    - High School.
    - *Putnam Hall School.*
  - Randolph—High School.
  - Rensselaer—High School.
  - Richmond Hill—High School.
  - Rochester—
    - East High School.
    - West High School.
  - Rockville Centre—South Side High School.
  - Rye—*Seminary.*
  - Sag Harbor—Pierson High School.
  - St. Johnsville—High School.
  - Saratoga Springs—High School.
  - Schenectady—High School.
  - Schuylerville—High School.
  - Sherburne—High School.
  - Skaneateles—High School.
  - Springville—*Griffith Institute.*
  - Suffern—High School.
  - Syracuse—Central High School.
  - Tarrytown—
    - Washington Irving High School.
    - *The Knox School.*
  - Troy—
    - *Emma Willard School.*
    - High School.
  - Utica—Free Academy.
  - Walton—High School.
  - Waterville—High School.
  - Watkins—High School.
  - White Plains—High School.
  - Woodhull—High School and Academy.
  - Yonkers—High School.
- Ohio:
  - Akron—*Buchtel Academy.*
  - Ashland—High School.
  - Canton—High School.
  - Cincinnati—
    - Madisonville High School.
    - *Oakhurst Collegiate Institute.*
  - Cleveland—
    - East High School.
    - Glenville High School.
  - Columbus—North High School.
  - Coshocton—High School.
  - Delaware—High School.
  - East Cleveland—Shaw High School.
  - Glendale—*College.*
  - Lima—High School.
  - Medina—High School.
  - Oberlin—*Academy.*
  - St. Marys—High School.
  - Salem—High School.
  - Toledo—
    - Central High School.
    - Jesup W. Scott High School.
    - *Smead School.*
  - Waynesville—High School.
  - Wyoming—High School.
  - Youngstown—
    - *Rayen School.*
    - South High School.

Oklahoma:
  McAlester—High School.
Pennsylvania:
  Allentown—
    *The College for Women.*
    *Frances Steitler School.*
  Altoona—High School.
  Beaver—High School.
  Beaver Falls—High School.
  Bellefonte—High School.
  Bellevue—High School.
  Bethlehem—*Moravian Parochial School.*
  Birmingham—*School for Girls.*
  Bradford—High School.
  Chambersburg—*Penn Hall.*
  Chester—High School.
  Clearfield—High School.
  Coudersport—High School.
  Crafton Station—Crafton High School.
  Danville—High School.
  Easton—High School.
  Erie—High School.
  Greensburg—High School.
  Harrisburg—Central High School.
  Holidaysburg—*Miss Cowles's School for Girls.*
  Kingston—*Wyoming Seminary.*
  Lansdowne—High School.
  Lebanon—High School.
  Lewistown—*Preparatory School.*
  Oil City—High School.
  Overbrook—*Miss Sayward's School.*
  Oxford—High School.
  Pennsburg—*Perkiomen Seminary.*
  Philadelphia—
    *Friends' Central School.*
    *Friends' Select School.*
    *Germantown Friends' School.*
    High School for Girls.
    *Miss Hill's School for Girls.*
    *Philadelphia Collegiate Institute.*
    (Germantown) *Walnut Lane School.*
    William Penn High School.
  Pittsburgh—
    Allegheny High School.
    *Dilworth Hall.*
    *Thurston Preparatory School.*
    *The Winchester School.*
Pennsylvania—Continued.
  Pottsville—High School.
  Reading—High School for Girls.
  Ridgway—Boro High School.
  Scranton—Central High School.
  Sewickley—High School.
  Sharon—High School.
  Washington—*Seminary.*
  Wayne—Radnor High School.
  Wellsboro—High School.
  West Chester—
    *Darlington Seminary.*
    High School.
    State Normal School.
  Westtown—*Boarding School.*
  Wilkes-Barre—High School.
  Wilkinsburg—High School.
  Williamsport—High School.
South Dakota:
  Sioux Falls—*All Saints School.*
Tennessee:
  Chattanooga—*Girls' Preparatory School.*
Texas:
  San Antonio—High School.
  Weatherford—*Texas Fairemont Seminary.*
Virginia:
  Beuna Vista—*Southern Seminary.*
  Roanoke—*Virginia College.*
  Staunton—*Mary Baldwin Seminary.*
Washington:
  Olympia—High School.
  Seattle—Broadway High School.
  Spokane—Lewis and Clark High School.
  Tacoma—High School.
Wisconsin:
  Eau Claire—High School.
  Grand Rapids—High School.
  Kenosha—*Kemper Hall.*
  La Crosse—High School.
  Milwaukee—
    East Division High School.
    *Milwaukee-Downer Seminary.*
    West Division High School.
    Wausau—High School.

## Schools Sending Students to Wellesley College on Certificate in September, 1914.

"I have included in this list some schools from which students were accepted only on a partial certificate, that is to say, these students supplemented their credentials from a given school with certificates from another school or with entrance examinations."—Letter from secretary to the board of admission, November 20, 1914.

| | Units. |
|---|---|
| Admission requirements | 15 |
| Prescribed units: | |
| English | 3 |
| Mathematics | 3 |
| History | 1 |
| Latin | 4 |
| Electives | 4 |

California:
  Palo Alto—*Castilleja School.*
  Piedmont—*Miss Ransom's and Miss Bridges's School.*
  San Francisco—*Miss Murison's School.*
Colorado:
  Denver—*Miss Wolcott's School.*
Connecticut:
  Clinton—*Morgan School.*
  Danbury—High School.

- Connecticut—Continued.
  - Greenwich—
    - *Ely School.*
    - High School.
  - Hartford—High School.
  - Middlebury—*Westover School.*
  - Middletown—High School.
  - New Britain—High School.
  - Norwich—*Free Academy.*
  - Stamford—*The Catherine Aiken School.*
  - Westport—Staples High School.
  - Winsted—*Gilbert School.*
- District of Columbia:
  - Washington—
    - *Madeira School for Girls.*
    - *National Cathedral School for Girls.*
    - Western High School.
- Georgia:
  - Atlanta—*Washington Seminary.*
  - Columbus—High School.
- Idaho:
  - Boise—High School.
  - Idaho Falls—High School.
- Illinois:
  - Chicago—
    - *Latin School.*
    - Lakeview High School.
    - *Stickney School.*
    - *University High School.*
  - Evanston—
    - *Academy.*
    - High School.
  - Godfrey—*Monticello Seminary.*
  - La Grange—High School (Township).
  - Moline—High School.
  - Mount Carroll—*Frances Shimer School.*
  - Oak Park—High School (Township).
  - Peoria—High School.
  - Rockford—High School.
  - Rock Island—High School.
  - Winnetka—
    - *Girton School.*
    - High School (Township).
- Indiana:
  - Crawfordsville—High School.
  - Fort Wayne—High School.
  - Indianapolis—*Tudor Hall School for Girls.*
  - Rockville—High School.
- Iowa:
  - Burlington—High School.
  - Des Moines—
    - North High School.
    - West High School.
  - Dubuque—High School.
- Kansas:
  - Topeka—
    - *College of Sisters of Bethany.*
    - *Washburn College.*
- Kentucky:
  - Louisville—*Semple Collegiate Institute.*
  - Shelbyville—*Science Hall.*
- Maine:
  - Bangor—High School.
  - Brunswick—High School.
  - Cherryfield—*Academy.*
  - Farmington—High School.
- Maine—Continued.
  - Portland—
    - High School.
    - *Waynflete School.*
  - Westbrook—High School.
  - York—High School.
- Maryland:
  - Baltimore—*Girls' Latin School.*
- Massachusetts:
  - Abington—High School.
  - Adams—High School.
  - Amherst—High School.
  - Andover—*Abbot Academy.*
  - Arlington—High School.
  - Ashburnham—*Cushing Academy.*
  - Boston—
    - Brighton High School.
    - *Curtis-Peabody School.*
    - Dorchester High School.
    - *Elm Hill School.*
    - *Girls' Latin School.*
    - *Miss Guild's and Miss Evans's School.*
    - *The von Mach School for Girls.*
    - Roxbury High School.
    - West Roxbury High School.
  - Bradford—*Academy.*
  - Brookline—High School.
  - Cambridge—High and Latin School.
  - Danvers—Holton High School.
  - East Northfield—*Northfield Seminary.*
  - Fall River—B. M. C. Durfee High School.
  - Fitchburg—High School.
  - Foxboro—High School.
  - Gloucester—High School.
  - Greenfield—High School.
  - Haverhill—High School.
  - Holden—High School.
  - Holyoke—High School.
  - Lenox—High School.
  - Lexington—High School.
  - Lowell—High School.
  - Lynn—Classical High School.
  - Mansfield—High School.
  - Marblehead—High School.
  - Milford—High School.
  - Natick—
    - High School.
    - *Walnut Hill School for Girls.*
  - New Bedford—High School.
  - Newton—*Mount Ida School for Girls.*
  - Newtonville—Classical High School.
  - Northampton—
    - *Miss Capen's School for Girls.*
    - *The Mary A. Burnham School for Girls.*
  - North Andover—Johnson High School.
  - Norwood—High School.
  - Salem—Classical High School.
  - Scituate—High School.
  - Somerville—High School.
  - South Hadley—High School.
  - Springfield—
    - Central High School.
    - *The Elms.*
  - Swampscott—High School.
  - Wakefield—High School.
  - Ware—High School.

Massachusetts—Continued.
    Wareham—High School.
    Warren—High School.
    Wellesley—
        *Dana Hall.*
        High School.
    Westfield—High School.
    Winchester—High School.
    Wollaston—*Quincy Mansion.*
    Worcester—
        Classical High School.
        South High School.
Michigan:
    Detroit—Central High School.
    Grand Haven—*Akeley Hall.*
    Houghton—High School.
    Jackson—High School.
Minnesota:
    Faribault—*St. Mary's Hall.*
    Minneapolis—
        Central High School.
        *Graham Hall.*
        *Stanley Hall.*
        West High School.
    St. Paul—
        *Oak Hall.*
        *Miss Loomis' School.*
Missouri:
    St. Charles—*Lindenwood Academy.*
    St. Louis—
        *Hosmer Hall.*
        *Mary Institute.*
        Soldan High School.
Nebraska:
    Omaha—
        *Brownell Hall.*
        Central High School.
New Hampshire:
    Concord—*St. Mary's School.*
    Manchester—High School.
    Nashua—High School.
    Portsmouth—High School.
    Rochester—High School.
    Wolfeboro—*Brewster Free Academy.*
New Jersey:
    Asbury Park—High School.
    Bloomfield—High School.
    Cranford—High School.
    Elizabeth—Battin High School.
    Englewood—*Dwight School.*
    Hackettstown—*Centenary Collegiate Institute.*
    Jersey City—Dickinson High School.
    Madison—High School.
    Milburn—High School.
    Montclair—High School.
    Morristown—High School.
    Mount Holly—High School.
    Newton—High School.
    Passaic—High School.
    Plainfield—High School.
    Ridgewood—High School.
    Rutherford—High School.
    South Orange—High School.
    Summit—*Kent Place School for Girls.*
    West Orange—High School.
New York:
    Albany—
        *Academy.*
        High School.
        *St. Agnes School.*
        State Normal College.
    Auburn—Academic High School.
    Binghamton—High School.
    Boonville—High School.
    Brooklyn—
        *Adelphi Academy.*
        Erasmus Hall High School.
        Girls' High School.
        *Packer Collegiate Institute.*
    Buffalo—
        Central High School.
        Lafayette High School.
    Cambridge—High School.
    Chateaugay—High School.
    Glen Cove—High School.
    Gloversville—High School.
    Huntington—Union School.
    Islip—High School.
    Jamestown—High School.
    Kingston—Free Academy.
    Mamaroneck—Rye Neck High School.
    Middletown—High School.
    Mount Vernon—High School.
    Oneida—High School.
    Palmyra—Classical High School.
    Plattsburg—High School.
    Rensselaer—High School.
    Richmond Hill—High School.
    Rochester—
        *Columbia Preparatory School.*
        East High School.
        West High School.
    Rye—*Seminary.*
    Schenectady—High School.
    Scarsdale—*Lockwood Collegiate School.*
    Utica—Free Academy.
    Yonkers—High School.
Ohio:
    Canton—High School.
    Cincinnati—
        Madisonville High School.
        *Oakhurst Collegiate School.*
        *University School.*
        Walnut Hills High School.
    Cleveland—Central High School.
    Columbus—
        *Collegiate School for Girls.*
        North High School.
    East Cleveland—Shaw High School.
    Medina—High School.
    Niles—High School.
    Oberlin—*Academy.*
    Sandusky—High School.
    Toledo—Scott High School.
    Urbana—High School.
    Xenia—Central High School.
    Youngstown—*Rayen School.*
Oregon:
    Portland—Lincoln High School.

Pennsylvania:
- Beaver Falls—High School.
- Bellefonte—High School.
- Bethlehem—*Moravian Parochial School.*
- Bradford—High School.
- Bryn Mawr—
  - *Baldwin School.*
  - *Miss Wright's School.*
- Canton—High School.
- Carbondale—High School.
- Du Bois—High School.
- Easton—High School.
- Franklin—High School.
- George School—*George School.*
- Harrisburg—High School.
- Huntingdon—*Juniata Academy.*
- Indiana—State Normal School.
- Kingston—*Wyoming Seminary.*
- McKeesport—High School.
- Pennsburg—*Perkiomen Seminary.*
- Philadelphia—
  - *Friends' Central School.*
  - *Friends' Select School.*
  - Girls' High School.
  - *Miss Hill's School.*
  - (Germantown) *Walnut Lane School.*
  - William Penn High School.
- Pittsburgh—
  - *Thurston Preparatory School.*
  - *Winchester School.*
- Pottsville—High School.
- Reading—Girls' High School.
- Ridgway—High School.
- Scranton—Central High School.
- Washington—*Seminary.*
- West Chester—*Darlington Seminary.*
- Westtown—*Boarding School.*
- Wilkes-Barre—
  - High School.
  - *Institute.*

Pennsylvania—Continued.
- Wilkinsburg—High School.

Rhode Island:
- Pawtucket—High School.
- Providence—
  - Hope Street High School.
  - *Moses Brown School.*
- Woonsocket—High School.

Tennessee:
- Chattanooga—*Girls Preparatory School.*
- Nashville—*Ward-Belmont Seminary.*

Vermont:
- Barre—Spaulding High School.
- Burlington—High School.
- Claremont—Stevens High School.
- Fair Haven—High School.
- Ludlow—Black River Academy.
- Rutland—High School.
- St. Johnsbury—*Academy.*

Washington:
- North Yakima—High School.
- Seattle—
  - Broadway High School.
  - Franklin High School.
- Spokane—Lewis and Clark High School.
- Tacoma—*Annie Wright Seminary.*
- Walla Walla—*St Paul's School.*

West Virginia:
- Elkins—High School.
- Huntington—High School.

Wisconsin:
- Ashland—High School.
- Beaver Dam—*Wayland Academy.*
- La Crosse—High School.
- Milwaukee—
  - *Milwaukee-Downer Seminary.*
  - West High School.
- Waupum—High School.

## Private Secondary Schools in Maryland and Pennsylvania (not Listed Elsewhere in the Bulletin) Belonging to the Association of Colleges and Preparatory Schools of the Middle States and Maryland and having the Privilege of Certificating their Graduates to Various Colleges of High Standing.

Maryland:
- Baltimore—
  - *Arundell School.*
  - *Bryn Mawr School.*

Pennsylvania:
- Lancaster—*Shippen School.*

Pennsylvania—Continued.
- Philadelphia—
  - *The Agnes Irwin School.*
  - *Holman School for Girls.*
  - *Maher Preparatory School.*
- Swarthmore—*Swarthmore Preparatory School.*
- York—*Collegiate Institute.*

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# PRESENT STATUS OF THE HONOR SYSTEM IN COLLEGES AND UNIVERSITIES

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# FOREWORD.

The aim of this bulletin is to set forth the present status of a phase of college and university administration that enlists the cooperation of students for the maintenance of fair play and honesty in the preparation and performance of classroom activities. A personal letter, with 11 questions appended, was submitted early in 1913 to 475 American colleges and universities; 425 of these institutions responded with detailed answers and with such available literature as was at hand.[1]

The term "honor system" is used to connote the formal recognition and adoption by students and faculty of a system of mutual responsibility among students for honest scholastic work. In several institutions student government is included under the general term "honor system"; in other institutions, especially the larger universities, the honor system is independent of any form of student government; in others, particularly the smaller colleges, it is the natural outgrowth of the participation of students in the direction and control of their various collegiate activities.

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[1] All replies have been carefully indexed and placed in the archives of the Swarthmore College library, where they are accessible for verification or for future study.

# PRESENT STATUS OF THE HONOR SYSTEM IN COLLEGES AND UNIVERSITIES.

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## HISTORY.

There is considerable disagreement among the claimants for the credit of having initiated the first well-defined honor system in an educational institution of higher learning in this country. The University of Virginia, Charlottesville, Va., has almost universally been credited with being the originator. An excerpt from the faculty minutes of May 4, 1842, is as follows:

> On motion of Judge Tucker,
>
> *Resolved*, That in all future examinations for distinction and other honors of the university each candidate shall attach to the written answers presented by him on such examination a certificate in the following words: "I, A. B., do hereby certify on honor that I have derived no assistance during the time of this examination whether oral, written, or in print, in giving the above answers."

This excerpt is undoubtedly authentic and definitely fixes the date for the formal adoption of the organized system as far as the University of Virginia is concerned.

Claims have also been put forward for the University of South Carolina, or South Carolina College, as it was formerly called. Dr. Flinn, chaplain of the institution, stated that there had been an informal honor system in vogue from the beginning of South Carolina College. He based his assertion primarily, according to Prof. W. Le Conte, of Washington and Lee University, "on a by-law formulated by the trustees of the college," previous to 1805, which reads:

> The sense of decency, propriety, and right, which every honorable young man carries in his bosom, shall be taken as a sufficient means of knowing these things, and he who pleads ignorance in such matters is unfit to be a member of the college.

This is not definite, nor is it indicative of an organized system of control. The authorities do not claim that the honor system was ever formally adopted at South Carolina College. They state:

> The system is here traditional from the beginning. It means simply that here professors and students are gentlemen in all their relations. The system has been in vogue ever since the college was founded in 1801.

This, however, is not the institution that now claims the credit for initiating the honor system. President Lyon G. Tyler claims that it started with the College of William and Mary, Williamsburg, Va., in 1779. Speaking of the University of Virginia, he writes in a personal letter:

> I think the evidence overwhelmingly demonstrates that the honor system had its origin in its application to examinations at William and Mary. It seems to me absurd to say that the University of Virginia deserves the credit of its organization when it had been recognized here long before the university existed. It was introduced at the university by William and Mary graduates, of whom the first board of visitors of the university was almost entirely composed. It was not formally recognized at the university until 1842, when Henry St. George Tucker offered a resolution in regard to its application to examinations, but Tucker himself was a student and graduate of this college, and got his ideas from this institution.

In another letter President Tyler says:

> It must be remembered that Mr. Jefferson and the large majority of the board of visitors of the University of Virginia were William and Mary alumni, and, therefore, were familiar with the system at William and Mary. Henry St. George Tucker was a brother of Judge Nathaniel Beverly Tucker, and both were educated at the college, and their father, Judge St. George Tucker, was a professor of law until 1804, when he resigned.

He also adds:

> I know that the University of Virginia claims the system's beginning, but while she was a noble practicer, she was not the beginner. Long before the university was established, it was practiced here and at other southern colleges.

So far as our data show, South Carolina College and William and Mary are the only institutions which practiced the honor system in or prior to 1842. While the appeal to the honor of the student may have been and no doubt was made in these and other colleges in this country, the University of Virginia was the first to inaugurate a definite system of control, legislation, and form of penalties. The honor system was apparently long in vogue in spirit before 1842, but at this time it was formally inaugurated at the University of Virginia. There are at present 123 institutions in which it is in actual practice. Of these, 45, or 37 per cent, are situated east of the Mississippi and south of Mason and Dixon's line; 5, or 4 per cent, are in New England; 35, or 28 per cent, are for men only; 8, or 6.5 per cent, are for women; and 80, or 65.5 per cent, are coeducational. Of these institutions, 101 have the honor system in all departments, 22 have it in some departments only. In addition to the 123 institutions included, 44 others claim to have the system in spirit but not in form, and 31 are considering its adoption in the near future.

## THE INVESTIGATION.

### METHOD AND DATA.

In order to get first-hand information on the practice of the honor system in one form or another in our American institutions of higher learning, the following letter with the appended 11 questions was sent to the presidents:

MY DEAR PRESIDENT ..........: In cooperation with the Department of Education,[1] I am making a comprehensive study of the *present status of the honor system in all the colleges and universities of this country*. A report of this study, which is to be completed before June, will be published, and a copy will be sent to each institution furnishing data.

If the honor system exists in your institution, will you kindly express your opinion as to its efficiency and its desirability and also what you think of its future.

Any available literature that you may have on the subject will be of great help.

As far as possible, will you please answer briefly the following questions?

Thanking you for any aid that you may be able to give us, I am,

Very sincerely, yours,

.......... ..........

1. Does the honor system exist for all or for a few departments in your institution?
2. Did the initiative for its adoption come from the faculty or from the students?
3. How long has the system been in vogue? Is it nominal or real? Growing in favor or not?
4. Does there exist, as a basis for its operation, a strong sentiment in its favor?
5. Does the operation of the system involve the signing of a pledge neither to give nor to receive aid? Does the pledge involve the obligation to report any infraction of the rules, especially as to examinations and reports?
6. Besides the work in examinations and reports, does the system cover any other activity in college life, such as student conduct or athletics?
7. What committee or council acts on cases arising? Is this composed of students, of members of the faculty, or of both?
8. Are the members of the committees elected directly, or is the committee membership made up of certain class officers, captains of athletic teams, etc.?
9. Has the student committee final jurisdiction, or does the appeal from action of this committee and veto lie in a faculty committee or the college president?
10. To what extent do the members of the faculty have confidence in the honor of the students to live up to the system? Is the instructor present during examination?
11. How often have cases of violation of the rules or spirit of the system occurred?

In addition to the answers to these questions a large number of personal letters were received with printed matter, including constitutions, by-laws, pledges, reports, etc. As this appears to be the first exhaustive inductive study in this field, the contents of the bulletin will deal exclusively with the data at hand.

## SCOPE.

*Departments included.*—It has been noted on page 24 that 123 institutions now practice the honor system in all or a few departments. In the Universities of Virginia, Texas, and California; in Princeton University; and in other institutions the honor system is in vogue in all departments and in all schools. In Cornell University, Ithaca, N. Y., it exists in the colleges of civil engineering, agriculture, and law; in George Washington University, Washington, D. C., and Leland Stanford Junior University, California, in the department of law; in the Universities of Cincinnati, Ohio, and Louisville, Ky., and in Susquehanna University, Selinsgrove, Pa., in the college of liberal arts;

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[1] I. e., of Swarthmore College.

in Syracuse University, New York, in teachers' college; in the University of Michigan, Ann Arbor, Mich., in the departments of medicine and surgery; in the University of Pennsylvania, in the Wharton school and the school of architecture; in Washington University, St. Louis, Mo., in the college and schools of mines, engineering, and chemistry; in Park College, Parkville, Mo., it is limited to juniors, and in several other colleges to seniors. In a number of institutions it is in vogue in a few or several departments, and is sometimes left to the discretion of the professors. In the University of Nebraska, Lincoln, Nebr., a few organizations agreed to try it out for their own members, and at the University of Rochester, New York, the men are under the honor system, but the women are not.

*Activities included.*—In Princeton the honor system is limited to examinations, but extends to all departments and is entirely under student jurisdiction. In Barnard College, New York City, it applies to examinations, quizzes, and all written reports; in Beloit College, Beloit, Wis., to written tests and reserve books in the library; in Williams College, Williamstown, Mass., to all written exercises; in the University of South Carolina, to conduct; in Denison University, Granville, Ohio, to interlinears and "ponies;" in Virginia Military Institute, Lexington, Va., to daily preparation of recitations; in William and Mary College, Virginia, to moral conduct; in Wofford College, Spartanburg, S. C., to failure to pay debts, to hazing, and sub rosa fraternities; in Wilson College, Chambersburg, Pa., to all rules made by student government association. In the University of Mississippi, "lying, stealing, gambling, drunkenness, or drinking in public places are dealt with by the council and punished by demerit, suspension, or dismissal."

*Relation to student government.*—Student government is a term used to indicate that the habits, privileges, and conduct of the students in all activities outside the classroom are regulated and controlled through an executive council elected by the student body; in other words, the administration of the college, as far as student activities are concerned, is in the hands of the students.

In adopting the honor system, students go a step further than mere student activities and make themselves responsible for classroom conduct, formerly entirely under the jurisdiction of the faculty. It is for this reason that, although the honor system is in reality a subdivision of student government, it is ordinarily dignified by a separate constitution and frequently by a separate council or executive committee.

Usually the honor system is an indication of a highly developed form of student government, but in some cases it exists without a student government; in such an event it is usually inaugurated by the faculty under careful supervision.

## METHODS OF ELECTING OR APPOINTING STUDENT COUNCILS.

The administrative council is commonly assembled in three ways; by election, by appointments made by the president of the college or the president of the student body; and by automatic choice—that is, a student becomes a member of the honor council because he is a member of some other organization. Of the colleges having the system, 116 replied to this question. In 63 cases the council is elected, in 18 cases it is appointed, and in 14 chosen. Of the remaining institutions, 12 report that part are elected and part chosen automatically; 5 that part are elected and part appointed; and 4 that part are appointed and part automatically chosen.

## FINAL JURISDICTION AND PENALTIES.

Of the 116 colleges reporting on final jurisdiction in cases of violation of the honor system, 81 report that final power lies in the faculty, 12 that it lies in the president, and 1 that it lies in the president and faculty. In all but 22 cases, then, the last decision is taken out of the hands of the student council, although, as a rule, the recommendation of the council is taken by the higher authorities. In these 22 cases, however, a student violating the honor system may be punished, suspended, or expelled from college without other authority than that of the student council.

## FACULTY SUPERVISION.

Sixty-four colleges and universities report that the instructor may be present or absent from the room, as he may choose. This gives the instructor an opportunity to answer questions and make the examination quite clear. At 29 institutions the instructor is absolutely excluded from the room, while at 21 institutions he must be present throughout the examination. It is noticeable that this is the case where the faculty are largely in control of the system.

## VIOLATIONS.

It is impossible to estimate the number of violations that have happened in each college since the adoption of the honor system. In most cases it is impossible to estimate even the average number of cases that come up per year, since no adequate records have been kept. The majority of colleges report that violations are "seldom" or "rare," and others that they occur two or three times a year. Only two large institutions have reported any considerable number of cases, the larger being on an average of 10 per year.

## GENERAL AIM AND PURPOSES OF THE HONOR SYSTEM.

The function and scope of the honor system are clearly set forth in the letters given below. The reply from Princeton University, Princeton, N. J., aside from its statement of the general plan, is a forceful argument in favor of the efficiency of the system.

Dean Elliott writes:

As a student under the system during the 4 years of my college course, as a member of the faculty for 12 years, and as dean of the college for 3 years, I have been brought into close touch with the system and believe in it with all my heart, and am sure that here it is a great success.

In a subsequent letter from Princeton, Editor Gilbert F. Close states:

You will see from the [following] description that the honor system at Princeton has been remarkably successful ever since its organization and has the cordial support and entire confidence of the faculty, as of the student body. The honor system at Princeton is one of our institutions of which we are exceptionally proud.

The system arose at Princeton in the only way in which it can with real vitality come into existence, namely, upon the initiative of the undergraduates themselves. It was first put into practice amongst us in the year 1894, and, being backed by a very sincere and solid body of opinion among the leading undergraduates, it was an unqualified success from the first. We have every reason to believe that it has secured absolute honesty in examination.

The establishment of the system has had many consequences. In the first place. the faculty has naturally followed the rule that in case anyone applying for admission to the university is found to have cheated in the entrance examinations, he must not only be refused admission to the university, but must understand that it will never be possible for him to enter. More than that, the effect of the system upon the general undergraduate morals has been very marked and very gratifying. It has brought about a frank and candid relation in respect of all matters of behavior and honor as between the undergraduates and the authorities of the university which has made all dealings between them satisfactory. I do not know anything in the history of the university which has had more extensive or more gratifying results or which has been less open to criticism in its operation.

Prof. Frank W. Nicolson, of Wesleyan University, Middletown, Conn., answered very fully. His answer to the question numbered 11 is:

I should say we have cases of violation of the rules on the average about once every three years. It seems to be the case that after a certain period has elapsed and a new generation of men have come to college, a certain laxity begins. Some one violates the honor system and is detected, when there is a general revival of interest in the system and more attention is paid to its provisions. Reporting by the students constitutes, of course, the crux of the situation, and unless they are willing to accept that obligation, the honor system will not succeed; nor will it succeed, I believe, if it is imposed upon the student body against their will or against the protest of any considerable minority. My judgment is, further, that it will succeed better in a small college than in a large college. As a graduate of Harvard I have expressed doubt to the authorities there, from time to time, whether such a system would succeed at Harvard. I have no hesitation in saying that it has succeeded splendidly at Wesleyan.

Prof. Farnham P. Griffiths, of the University of California, Berkeley, Cal., replies to question 5 as follows:

I take it that you mean by the "honor system" some method to insure honesty in examinations. Our student self-government is far larger and more comprehensive in its scope. It means that the responsibility in matters of student discipline rests with the students themselves. Incidentally and as a portion of a larger program, the question of honesty in examinations is, of course, involved. Our students do not sign any pledge. They take it in a measure to be an insult to ask a man to say that he has received no help in examinations. As a matter of fact, however, a student observing dishonesty in a classroom would ordinarily report the case to the undergraduate student affairs committee, who would then take evidence, hear witnesses, and recommend a penalty varying from deprivation of credit in the course to suspension from the university. An instructor observing a case of dishonesty would similarly report the circumstance to the undergraduate committee.

The significance of the honor system is emphasized by Jesse H. Holmes, Ph. D., professor of philosophy in Swarthmore College, Swarthmore, Pa., in the following words:

> There are only two systems possible in dealing with examinations. These are the "honor" system and the "dishonor" system. A student does not cheat to himself alone. A cheating student dishonors his whole class and lowers the tone of the college. He cheapens the degree of every student who graduates from the college. In my judgment, it is the duty of the students of this college to see to it that no dishonest paper ever goes into the hands of an instructor. This does not mean that the student must tell the instructor of the dishonest work, but it does mean that he is to make it impossible for the dishonest student to receive credit for stolen work or to remain permanently in the college.

In a statement, recently, Ex-President Taft said that he approved of the honor system proposed for Yale, provided that a punishment is imposed for violations. He added:

> In effect it is a request that the immediate responsibility for the student's fairness in the examinations be transferred from the faculty to the class. I have not the slightest objection to this, if the class as a whole takes the responsibility. This responsibility, however, should involve an obligation by the class as a whole to secure the fairness which ought to obtain.
>
> If, therefore, the class will stipulate, as the class does in the scientific school under its honor system, that unfair conduct by any member of the class in the examination, known to the other members of the class, shall be made the subject of investigation and trial by a class tribunal, with a report of the facts and a recommendation of a penalty, if any is deemed necessary, to the dean for confirmation and action, I strongly approve the change proposed; otherwise I do not.

### INSTITUTIONS USING AN HONOR SYSTEM IN ALL DEPARTMENTS.

Letters were received from practically all the institutions written to, in addition to the replies to the questionnaire. From these letters and replies the following selected excerpts are given. They produce strong evidence in favor of the honor system.

The dean of Beloit College, Beloit, Wis., remarks:

> Though many feel that the honor system is not thoroughly adequate, yet I know of no one in the faculty who would go back to the old proctor system of supervising examinations.

Dean H. D. Campbell, of Washington and Lee University, Lexington, Va., in a detailed explanatory letter, states that the honor system is satisfactory and he does not see how they could get along without it. At Barnard College, New York City, Dean Virginia C. Gildersleeve finds it growing in favor; at Smith College, Northampton, Mass., President Marion L. Burton states that students feel it obligatory to report, but they do not wish final jurisdiction at this time. Ex-President Francis P. Venable, of the University of North Carolina, Chapel Hill, N. C., maintains the sentiment in its favor is practically universal after 50 years of experience. The method amply justifies its existence at Randolph-Macon Woman's College, Lynchburg, Va., according to President William A. Webb. President R. S. Hyer, of Southwestern University, Georgetown, Tex., regards it as the only agency that will prevent cheating in examinations. The State University of Kentucky, Lexington, Ky., has been greatly benefitted by the system according to President Henry S. Barker.

President Alexander C. Humphreys, of Stevens Institute of Technology, Hoboken, N. J., emphasizes the view that the honor system is successful, but it will not work itself; the president and a majority of the faculty must believe in it; the students must give their unqualified adherence to the system; and there must be hearty cooperation between students and faculty. Practically the same point of view is brought out by President Joseph Swain, of Swarthmore College, who says that the students must have a clear-cut conviction that it is their duty to be honest themselves and insist on honesty in others, and that the offenders must be treated kindly but justly. As an evidence of the success of the honor system, Ex-Chancellor Andrew A. Kincannon, of the University of Mississippi, University, Miss., says: "All students of lawless tendencies oppose it vigorously." Prof. Edward S. Joynes, of the University of South Carolina, who has frequently contributed articles to *The Nation* in defense of the method of relying on student honor in class activities, writes that "the only true system for the education of a *gentleman* by *gentlemen* is the *honor system*—that is, the system of mutual respect and confidence."

President Harry A. Garfield, Williams College, writes:

> I beg to say that I have observed the working of the honor system both here and at Princeton, and I believe in the system in principle and can testify to the efficiency with which it works in both places.

## INSTITUTIONS JUST ADOPTING AN HONOR SYSTEM.

Among the large institutions that have recently initiated an honor system, the following are cited. Registrar F. S. Ball, of Johns Hopkins, Baltimore, Md., says:

> The authorities have always taken the ground that the only effectual way of securing honesty in examinations is through appeal to the honor of the students. They are given to understand that we assume that they can be trusted.

Dean James R. Angell, January 12, 1914, wrote concerning the University of Chicago:

> The university has not officially adopted this system. The students have voted on this matter and decided by a rather large majority to give the plan trial, under a somewhat peculiar form suggested to fit our local conditions. What the university authorities will decide I can not say.

Among other institutions recently adopting the honor system may be noted the architectural and science departments of the University of Pennsylvania, Philadelphia, Pa., and the arts department at Columbia University, New York City.

## INSTITUTIONS PLANNING TO ADOPT THE HONOR SYSTEM.

Among the prominent institutions that do not have the honor system (although most of them have some form of student council at present) are several which are planning to adopt it in the near future. This is true of De Pauw University, Greencastle, Ind.; Grinnell College, Grinnell, Iowa; Hamline University, St. Paul, Minn.; Rockford College, Rockford, Ill.; State University of Nevada, Reno, Nev.; University of North Dakota, University, N. Dak.; University of Oregon, Eugene, Oreg.; University of Pittsburgh, Pa.; and the University of South Dakota, Vermilion.

As to the future policy of some other well-known institutions, the following excerpts indicate the trend of opinion:

Ex-President Ethelbert D. Warfield, of Lafayette College, Easton, Pa., writes:

> At the present time there is nothing in operation with regard to the honor system in this college. Several experiments in participation of students in carrying out the rules have been made, but they have gradually lapsed.

W. W. Smith, of the University of Oregon, Eugene, Oreg., states:

> We have not as yet established the honor system in the University of Oregon. The subject is at present being debated by the faculty, but to be of permanent help we realize that the initiative must come from the student body.

## INSTITUTIONS HAVING AN HONOR SYSTEM IN VOGUE IN SPIRIT BUT NOT IN ORGANIZATION.

In addition to those institutions that have the honor system or are considering its adoption, others may be said to have it in spirit if not in form. The following will indicate the drift of opinion:

President Samuel Dickie, of Albion College, Albion, Mich., says:

> Several years ago, upon my own suggestion, there was organized among the students a self-government association, membership in which was open to all the students. The entire student body acting by classes and departments select members of a small body known as the student senate.

In Converse College, Spartanburg, S. C., the student government association has general direction of the administration of the examinations. President Robert P. Pell says:

> We have an excellent system of student government, and all cases, short of those demanding expulsion, are handled by the board of managers constituting the student government judicial body.

In Dickinson College, Carlisle, Pa., the class deans and fraternities have been enlisted to help solve the problem of examinations and written work.

President Thomas McClelland, of Knox College, Galesburg, Ill., writes that "for several years there has existed in Knox College a student council which has been found to be advantageous."

Among the larger institutions that have the system in spirit is Bryn Mawr College, Bryn Mawr, Pa. In a sense everything at Bryn Mawr is on the honor system; the students cooperate with the faculty just as the faculty cooperates with the students in self-government.

The secretary to the president at Mount Holyoke College, South Hadley, Mass., writes:

> Mount Holyoke has never adopted the honor system. The instructors are present during examinations, and cases of cheating either in examinations or in reports have been very rare. The students are on their honor to report on the daily exercise requirement and also in the matter of registration for leaving town. The student government association has the oversight of chapel and church attendance. The students are placed upon their honor in the matter of reporting church attendance, but there are proctors who look after the chapel attendance.

Dean Holgate, of Northwestern University, Evanston, Ill., states that "full confidence exists between student and instructor, and examinations are conducted on that basis."

President Le Baron R. Briggs, of Radcliffe College, Cambridge, Mass., replies: "Not in vogue in the usual sense. Of course, in themes students are put on their honor."

President Carl Lee Mees, of Rose Polytechnic Institute, Terre Haute, Ind., reports:

> Inasmuch as we have no straight honor system, it will be rather difficult to answer the categorical questions as you ask them. We try to combine the honor system with a reasonable amount of supervision, and though the results are not all we would wish, they are as satisfactory as any system so far used.

Dean J. G. Eldridge, of the University of Idaho, Moscow, Idaho, writes that the "honor system exists not at all formally, though individual teachers often leave the conduct of examinations to the students."

President John Cavanaugh, of the University of Notre Dame, Ind.:

> No action of the university as a whole. Honor system is left to individual professors. Cheating in examination is among the causes for expulsion.

At the University of Southern California, Los Angeles, Cal., President George F. Bovard replies:

> The University of Southern California has no regular honor system. However, the students are placed quite largely upon their honor in their general conduct and in their work. We have student committees and faculty committees who give special attention to the general conduct of the students, but we have no system worthy of being designated an honor system.

The University of Washington, Seattle, Wash., reports that both faculty and students desire the honor system, but so far it has been tried only by a few departments.

### INSTITUTIONS FAVORING THE HONOR SYSTEM, BUT WHICH DO NOT HAVE IT.

Among the institutions that do not have the honor system there are several whose replies state, directly or indirectly, that they believe it to be worth striving for, as opportunity permits. For example, Dean H. M. Raymond, of Armour Institute of Technology, Chicago, Ill., states: "We are hoping that such a system may be established in the near future."

Chancellor Samuel Avery, of the University of Nebraska, Lincoln, Nebr., after calling attention to an effort on the part of some student organizations to have a system binding upon their own members, concludes: "The faculty in this institution have always taken the attitude that the honor system would be welcomed whenever general student sentiment should make possible its enforcement."

President Palmer C. Ricketts, of Rensselaer Polytechnic Institute, Troy, N. Y., comments: "We do not have the honor system here. I am sorry we do not have it, and hope some time to see it established."

President J. T. Kingsbury, of the University of Utah, Salt Lake City, says: "The honor system is a problem that we have not yet undertaken to solve. I believe that it would be a good thing to try."

### INSTITUTIONS IN WHICH THE SENTIMENT IS NOT SUFFICIENTLY MATURE.

Among those institutions that do not have the honor system, a small group do not find the "time ripe for its adoption and application." Dean Frank G. Wren, of Tufts College, Tufts College, Mass., writes:

> As yet Tufts College has not adopted the honor system. It has seemed unwise to the faculty to consider the adoption of such a system until student sentiment is strongly in favor of it. As yet there is no evidence that such a sentiment exists.

President George E. Vincent, of the University of Minnesota, Minneapolis, Minn., says:

> The honor system has never been adopted in this university. There has been some agitation at various times for the introduction of this plan, but so far opinion has never crystallized in such a way as to justify the introduction of the policy.

President Ellen F. Pendleton, of Wellesley College, Wellesley, Mass., says:

> The subject of an honor system has been discussed by our students somewhat, although not formally, and it has been occasionally suggested by our faculty, but no action has been taken by either body.

## INSTITUTIONS IN WHICH PECULIAR CONDITIONS MILITATE AGAINST ADOPTING THE HONOR SYSTEM.

There are a number of institutions where peculiar conditions either militate against the adoption of the honor system or take its place. For example, President G. Stanley Hall writes:

> Clark University, Worcester, Mass., has only graduate students fitting for the higher degrees, and no examinations save personal oral ones. The professors test the students individually, then each candidate is brought before all the professors in the departments where he has studied. Therefore you see that your inquiry is not relative here.

President Edmund C. Sanford, Clark College, Worcester, Mass., writes:

> The chief arguments against the undertaking of the system here were, first, that we had a genuine honor system already in operation, though an informal and unorganized one; second, that the requirement of any pledge at the end of examination papers and the like was something of an insult to honest men—like asking a reputable man to hang up a sign in his store that he does not use short weights; and, third, that it is no honorable student conduct to bring the cheating of a fellow student to the notice of the authorities either in the student body or in the faculty.
>
> It is my idea that a good deal of what might be called cheating—for example, the transcription of notebooks when these must be submitted to the instructor, or the obtaining of translations by weaker students from the abler in the daily work—are matters which are determined in a large measure by student custom, and never raise the question of conscience with many students of honest intention who make use of them. In such cases the matter lies largely in the hands of the instructor, who usually can get work done in the way he desires by making clear just what he wants.

Among the larger universities, Harvard University, Cambridge, Mass., has always taken the point of view that its size materially makes the application of the honor system very difficult. President Abbott Lawrence Lowell says:

> The honor system at examinations does not exist at Harvard University at all, and, indeed, there are great difficulties to introducing it, arising from the size and cosmopolitan nature of the student body. I take it that the honor system depends not only on the individual, but on the fact that the whole student body will resent and prevent any breach of it by any member. This is much easier to carry out in a body which is small and homogeneous.

Dean B. S. Hurlbut, of Harvard, remarks on the subject:

> We have a student council. This is an undergraduate organization and deals only with undergraduate affairs. As it is a most excellently representative body, however, I find it of the greatest service for consultation and in dealing with a good many matters of government that come within the province of the dean. The influence of our council is, I think, steadily growing, and I try to do everything in my power to increase this influence.

Another type of institution in which the formal honor system is seldom in vogue is the theological seminary and school. President John P. Chadwick, of St. Joseph's Seminary, Yonkers, N. Y., replies:

> I beg to state that the honor system, as it is generally known, does not exist in our seminary. With us conscience receives such attention that the development of naturally good character aspiring for the priesthood does not require the honor system. Our training, of course, includes honor, inasmuch as our students are taught to reproduce in their life by prayer, self-denial, and earnest work the virtues of our Blessed Lord. However, I can see the advantages of the honor system in a secular college, and I wish you every success.

President Francis Brown, of Union Theological Seminary, New York City, says:

> The question of the adoption of the honor system, technically so called in educational circles, has never come up at this seminary because, doubtless, of the conditions involved in seminary life. We rely greatly upon the honor of our students, but there is no occasion for us to emphasize this by any organic law. In fact, we secure all the advantages of such a law without its enactment. Under these circumstances it would not be possible for me to answer your questions in detail.

Then why not [illegible]

Aside from the types of institutions just discussed, there is another type where a breach of honor is considered a serious offense, with uniform and definite penalties. These are the military colleges, academies, and schools. The United States Naval Academy, Annapolis, Md., is a striking example, and ex-Supt. John H. Gibbons, captain, United States Navy, writes:

> I have to inform you that, owing to the difference between conditions at this institution and those at civil institutions of learning, it is difficult to make answer to the categorical questions presented.
>
> Midshipmen are appointees of the Government, being officers of the Navy in a qualified sense. They are paid for their services, and the duties that they perform under orders from superior authority are in the nature of contract obligations. They are responsible for their conduct, and for any derelictions they may legally undergo punishment, including dismissal from the naval service. Their relations to the constituted authorities are therefore different from those of an individual who attends a civilian institution, paying for the privilege of so doing, and whose only responsibility to the constituted authorities is such as he may voluntarily assume for the privilege of continuance at the institution.
>
> The honor system has always been a basic principle of this institution, and a failure to meet the requirements thereof constitutes a most serious offense which, in its most flagrant forms, affords grounds for dismissal.

## INSTITUTIONS THAT HAVE NOT FELT THE NEED OF THE HONOR SYSTEM.

Another group of institutions have not felt the need of the honor system according to their letters.

Vivian B. Small, of Lake Erie College, Painesville, Ohio, writes:

> Examinations are given under the old-fashioned faculty proctoring system. So far as I know, no difficulties have ever arisen to cause either faculty or students to desire any change.

Ex-President Arthur H. Wilde, of the University of Arizona, Tucson, Ariz., replies:

The honor system is not in effect in this university. There seems to be no criticism of the present conditions, and a mutual feeling of good understanding and of confidence exists between the faculty and students, so that neither faculty nor students have seriously raised the honor question.

President William F. Dooley anticipates the probable future policy of the University of Detroit, Michigan, by saying:

The honor system does not exist in any of the departments of this institution, has never existed, and there is no likelihood that it will be adopted.

### INSTITUTIONS THAT FRANKLY OPPOSE THE HONOR SYSTEM.

In addition to the points of view in regard to collegiate and university policy in reference to the honor system as outlined above, several institutions have expressed the view that they do not have the honor system and do not believe in it. Prof. W. E. Everett, of Brown University, Providence, R. I., states:

[illegible] government notice words alike, as far as possible

The question has been discussed, but always adversely. We do not believe in the system, although we endeavor as far as possible to cultivate ideals and standards of honor among our students. Need of more daring

Ohio University, Athens, Ohio, has not considered its introduction. President Alston Ellis declares:

Conditions here do not seem to suggest that its adoption by us would be any help to the students or governing body. In the main our students are self-supporting and law-abiding and give those in charge of the institution but very little trouble of a disciplinary nature. I suppose my own view of the questions presented would be of no special service to you, but I can say that I do not feel disposed to give any large amount of control to the student body. [illegible] distrust the [illegible] need the [illegible]

President William P. Few, of Trinity College, Durham, N. C., says:

We do not have, and I do not believe in, the so-called "honor" system, but we try here as in everything else to have students bear their share of responsibility for the moral safety of the community. [illegible] the commun[illegible] [illegible] the full share

The view of Vassar College, Poughkeepsie, N. Y., as given by Secretary Ella W. Caleb, is:

The jurisdiction of the students does not extend to the conduction of the examinations, which are still proctored by the instructors. The greatest danger in self-government among students is that they will so burden themselves with the details of administration that they can not properly do the special work for which they came to college. We can rely upon them to do the right thing, but feel that they need to be guarded a little against undertaking too much. It is from no unwillingness to trust them that they do not have fuller powers, though in fact, I think, that they have been granted everything they asked for.

Acting President J. B. Van Meter, of Goucher College, Baltimore, Md., summarizes the situation there in the following letter:

We have nothing organized in this college that would seem to admit of replies to your specific questions. There is a students' organization which takes cognizance of student conduct in all its reaches, and the general consciousness of the student body is such as would lie back of what is usually denominated an honor system. Eight or ten years ago there was a good deal of talk about an honor system, but it did not come to anything. I think students and faculty were equally interested in the matter. Personally I do not like the honor system. It has a suggestion in it that under a specific system there are principles controlling conduct which need not control it apart from that system. It seems to me that it is very desirable to recognize principles of honor as inhering in the very constitution of society and not growing out of a particular legislation or organization.

Bowdoin College, Brunswick, Me., holds practically the same idea of the honor system as that held by Brown University. President William De Witt Hyde, who has previously written against the honor system, tersely writes in reply to the questions submitted:

> We have no honor system at Bowdoin. Our effort here is to get the honor without the system, and while we are not entirely successful with incoming students, it is a very rare thing for a man in the upper classes to cheat.

If [illegible] method has produced honor, why have [illegible] by suspicion

## INSTITUTIONS IN WHICH THE HONOR SYSTEM HAS FAILED.

It is frequently assumed that a large number of institutions have tried the honor system without success; when studied in the last analysis that number, however, is small. Bowdoin has been mentioned as an example of one of these institutions, but President Hyde says the system has never been formally tried in his college.

The following institutions have discarded the honor system temporarily or permanently, and it will be of interest to see what their comments are. Prof. H. M. King, of Cornell College, Mount Vernon, Iowa, says:

> No general honor system is in vogue with us. From time to time there has been some small agitation about the matter among the students, sometimes apparently only for the sake of having something to discuss in the college paper. One department, under an instructor not now with us, tried the plan in his examinations for some short time, but gave it up. There has been no general faculty action on the matter, and no machinery of any general use.

President Henry A. Apple, of Franklin and Marshall College, Lancaster, Pa., writes:

> The system did not work satisfactorily, mainly, it is thought, on account of the "reporting" feature, the students being reluctant to report violations of the rules, even to their own chosen representatives on the administrative board or senate. It was accordingly abolished in 1906 by the faculty, without a word or sign of protest on the part of the student body.

The other institutions that have definitely stated that this system has been dropped claim that this has been due in the main to unsatisfactory conditions, and they are working toward its reestablishment. Registrar Forest C. Ensign, of the State University of Iowa, Iowa City, says:

> I must say that the honor system does not prevail here. The college of medicine had installed the honor system some years ago, but this year, at the request of the

students, it was abandoned. We are not quite ready for it. We have some student control now, largely through an advisory committee known as the greater university committee. Through the leadership of this committee it is likely that a well-organized student council will be created with the honor system in view. We feel that such a system must come as a genuine demand on the part of the students themselves, and the matter will not be pushed.

Prof. H. G. Parker, of William Jewell College, Liberty, Mo., says:

I am really at a loss to answer your inquiries, as our honor system is in somewhat of a chaotic condition. Some years ago we supposedly had an honor system which involved the signing of a pledge on the part of the students, but it did not prevent trouble, and the whole scheme fell into disrepute. An attempt was made about two years ago to perfect a complete honor system, but as the crux of the whole matter rested on the willingness of a student to report a fellow student, the matter again fell through. Just recently a movement has been started to put this sort of business in the hands of a student senate, elected from the junior and senior classes. We have not time to try it out, and I can not report, therefore, as to how it will work.

## INSTITUTIONS WHICH REPLY NEGATIVELY, WITHOUT COMMENT.

In reply to the information solicited from the 475 institutions in regard to the use of the honor system, 147 replied without many comments that it was not in operation.

## CONCLUSIONS.

The material in this monograph would lead to the conclusion that, to secure the best results from any form of the honor system, both student and faculty sentiment should be in favor of its adoption. Frequently, starting in one class or department, it has been found to be most successfully developed when applied to the whole institution, but loses in efficiency when applied to too wide a range of activities.

The 123 institutions that are trying the system are its strongest advocates, and there has been a steady but marked tendency toward general adoption throughout this country. This tendency has gained most in strength during the past three years.

The chief arguments against the honor system may be summed up as follows: Classroom honesty is an academic matter; some people believe, therefore, that it should be under faculty jurisdiction and control. Some executives do not care to give more control to students, since these duties are difficult to define and take the students' time from the regular studies. Students contend also that it tends to burden the better or more honest students with the shortcomings of the delinquent ones. In some communities there is a sentiment that signing a pledge implies dishonesty, and in many institutions there is still a feeling that individual honor does not involve the reporting of theft and dishonesty on the part of others. Some large institutions have such a cosmopolitan group of students that homogeneity in the classroom ideals is difficult to secure and maintain; small institutions have younger preparatory students to include in their regulations.

The immediate and ultimate aims of the honor system which may be considered of most significance are: It rests fundamentally upon the initiative of undergraduates, and initiative always has potential good as a possibility; it is dependent upon unity of purpose and community of effort, which is another valuable asset when turned in the right direction; it tends to bring about a frank and candid relation between the students and the administrative force of an institution; it tends toward increasing the loyalty to an institution, by strengthening public opinion in regard to the virtue of honesty; it increases individual responsibility, which may take a marked drop during college days; it breeds confidence and selfrespect in similar situations; as a rule it appeals to the better class of students, and leads them to look at their own actions and the actions of other fellows from the point of view of an adult; it utilizes the stronger characters to help bolster up the weaker ones.

The success of the honor system is due in the main to the natural desire of students to formulate ideals for themselves, the interest for cooperative activity and team work and the pride involved in creating college public sentiment and college loyalty.

It is not possible to recommend a single type of constitution for organization of the honor system, but the constitution and by-laws should be short, simple, and definite, since new and untried students must be educated yearly. Likewise the enthusiasm is sure to wane every two or three years.

In general a formal pledge is desirable, and ultimately this should include the willingness or obligation to report all infractions by others.

The administrative council is apparently most effective when composed of students only, and the membership when both elective and automatic.

Final jurisdiction in regard to penalties is very successfully administered in a number of large institutions by the students, but, in general, it is better to have this power rest ultimately with the faculty and the board of regents or trustees.

*Tabular summary as to the use of the honor system.*

| Institutions. | Institution established. | Exists in all departments (+) or in some departments (−). | Initiative from faculty (F.), or from students (S.), or both. | Year of adoption. | Growing in favor (+), or not (−). | Personal pledge (+), no pledge (−), pledge to report others (++). | System extends beyond examinations (+), or limited to examinations (−). | Administrative council of students (S.), faculty (F.). | Council elected (E.), appointed (A.), automatically chosen (C.). | Final power in students (S.), president (P.), faculty (F.). | Instructor present (+), present at times (±), absent (−). |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Adelphi College, New York | 1896 | − | S. | 1901 | + | − | + | S. | E. | F. | ± |
| Adrian College, Michigan | 1859 | − | F. | 1905 | − | − | + | S. | E. | F. | − |
| Agnes Scott College, Georgia | 1887 | + | F. | 1905 | + | + | − | (?) | (?) | F. | ± |
| Agricultural and Mechanical College, Texas | 1876 | + | F. | 1876 | + | + | + | S. | E. | S. | ± |
| Alabama Polytechnic Institute, Alabama | 1872 | + | S. | 1909 | + | + | − | S. | E. | F. | ± |
| Albright College, Pennsylvania | 1895 | + | F. | 1910 | + | + | + | S. | C. | F. | ± |
| Alfred University, New York | 1836 | + | S. | 1908 | + | − | − | S. | E. | S. | − |
| Amherst College, Massachusetts | 1821 | + | S. | 1906 | + | + | − | S. | E. & A. | S. | − |
| Antioch College, Ohio | 1853 | + | F. | 1853 | + | − | + | S. & F. | E. & A. | P. | ± |
| Auburn Theological Seminary, New York | 1820 | + | F. | 1901 | + | − | + | S. & F. | E. | S. | ± |
| Barnard College, New York | 1889 | + | S. | 1912 | + | − | − | S. | E. | F. | − |
| Beloit College, Wisconsin | 1846 | + | S. | 1898 | + | + | + | S. | E. | F. | − |
| Bridgewater College, Virginia | 1880 | + | F. | 1898 | + | ++ | + | S. & F. | A. | F. & P. | ± |
| Butler College, Indiana | 1850 | + | F. | 1911 | + | + | − | S. | E. | F. | ± |
| Carnegie Institute of Technology, Pennsylvania | 1900 | − | F. | 1913 | + | − | + | S. | E. | F. | ± |
| Central University, Iowa | 1853 | + | F. & S. | 1908 | + | − | + | S. & F. | A. | F. | ± |
| Charleston College, South Carolina | 1785 | + | (?) | 1843 | + | ++ | (?) | S. | C. | S. | + |
| Citadel, the Military College of South Carolina | 1842 | − | F. | 1908 | + | ++ | + | S. | C. | P. | ± |
| Clemson Agricultural College, South Carolina | 1893 | + | S. | 1903 | + | − | − | S. | C. | F. | − |
| Coe College, Iowa | 1881 | + | F. | 1911 | + | − | − | S. | E. & C. | F. | − |
| Columbia University, New York | 1754 | − | S. | 1911 | + | + | − | S. | E. & C. | F. | ± |
| Concordia College, Indiana | 1839 | + | F. | 1861 | + | − | + | F. & S. | E. & A. | F. | + |
| Cornell University, New York | 1868 | − | S. | 1907 | + | − | − | S. | E. | S. | − |
| Cumberland College, Arkansas | 1885 | + | F. | 1912 | + | − | + | S. | E. | F. | ± |
| Davidson College, North Carolina | 1837 | + | F. | 1837 | + | + | − | S. | E. | F. | + |
| Denison University, Ohio | 1831 | + | F. & S. | 1913 | + | ++ | − | S. | E. | F. | ± |
| Eastern College, Virginia | 1899 | + | S. | 1909 | + | + | + | F. & S. | C. | P. | ± |
| Elon College, North Carolina | 1889 | + | F. & S. | 1889 | + | ++ | + | S. | E. | F. | ± |
| Emory and Henry College, Virginia | 1837 | + | S. | (?) | + | ++ | − | S. | A. | F. | ± |
| Emporia College, Kansas | 1882 | + | F. & S. | 1911 | + | − | + | S. | E. | F. | − |
| Erskine College, South Carolina | 1839 | − | F. | 1911 | − | + | + | F. | A. | F. | + |
| Fairmount College, Kansas | 1895 | + | S. | 1912 | + | − | + | S. | E. | F. | ± |
| Fargo College, North Dakota | 1887 | − | S. | 1913 | + | + | + | S. | E. | F. | + |
| Furman University, South Carolina | 1851 | − | F. | 1908 | + | + | − | S. | A. | F. | + |
| Gallaudet College, District of Columbia | 1864 | + | F. | 1903 | + | + | − | F. | A. | F. | + |
| Georgia School of Technology, Georgia | 1888 | + | S. | 1906 | + | ++ | − | S. | E. & C. | S. | ± |
| Georgetown College, Kentucky | 1829 | + | S. | (?) | + | + | − | S. | E. | (?) | (?) |
| George Washington University, District of Columbia | 1821 | − | S. | 1910 | + | + | − | S. | E. & C. | P. | ± |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hamilton College, New York | 1812 | + | F. & S. | 1912 | + | + | − | F. & S. | E. | P. | ± |
| Hampden-Sidney College, Virginia | 1776 | + | (?) | 1855 | + | + | + | S. | E. | S. | + |
| Haverford College, Pennsylvania | 1833 | + | S. | 1898 | + | ++ | + | S. | E. | S. | − |
| Hendrix College, Arkansas | 1884 | + | S. | 1892 | − | + | − | F. | A. | F. | + |
| Hiwassee College, Tennessee | 1849 | + | F. | 1911 | − | + | − | F. & S. | E. | F. | + |
| Hobart College, New York | 1822 | + | S. | 1895 | + | ++ | + | S. | E. | F. | ± |
| Iowa Wesleyan University, Iowa | 1842 | + | F. | 1910 | + | − | + | F. & S. | E. | F. | + |
| Kenyon College, Ohio | 1824 | + | S. | 1901 | + | ++ | + | S. | E. | S. | − |
| Keuka College, New York | 1890 | − | F. | (?) | + | − | (?) | (?) | (?) | P. | ± |
| Lawrence College, Wisconsin | 1847 | + | F. | 1908 | + | + | + | S. | E. | F. | − |
| Lehigh University, Pennsylvania | 1866 | + | S. | 1904 | + | + | − | S. | A. | F. | ± |
| Leland Stanford University, California | 1891 | − | F. | 1891 | + | − | − | S. | E. | S. | − |
| Lincoln College, Illinois | 1865 | + | S. | 1907 | − | + | − | F. | A. | F. | ± |
| Marietta College, Ohio | 1835 | + | F. & S. | 1910 | − | + | − | S. | E. | F. | − |
| Miami University, Ohio | 1809 | + | F. | 1911 | + | + | + | S. | E. & A. | F. | − |
| Millsaps College, Mississippi | 1892 | − | F. | 1909 | + | + | − | S. | E. | S. | + |
| Missouri Valley College, Missouri | 1889 | + | F. & S. | 1893 | + | + | − | F. | E. | F. | ± |
| Muskingum College, Ohio | 1837 | + | S. | 1908 | + | + | + | S. | E. | F. | − |
| North Carolina College of Agricultural and Mechanical Arts | 1889 | + | S. | 1910 | + | − | − | S. | E. | S. | ± |
| Oberlin College, Ohio | 1833 | + | S. | 1910 | + | + | − | S. | E. | F. | − |
| Ohio Wesleyan University, Ohio | 1842 | + | F. & S. | 1911 | + | + | − | S. | E. | F. | ± |
| Ottawa University, Kansas | 1865 | + | F. | 1910 | + | − | − | F. | A. | F. | ± |
| Pennsylvania College, Pennsylvania | 1832 | + | S. | 1911 | + | + | − | S. | E. | F. | ± |
| Princeton University, New Jersey | 1746 | + | S. | 1894 | + | + | − | S. | E. & A. | S. | ± |
| Randolph-Macon College, Virginia | 1830 | + | S. & F. | 1865 | + | + | − | S. | E. | S. | ± |
| Randolph-Macon Woman's College, Virginia | 1893 | + | S. & F. | 1893 | + | ++ | + | S. | E. | F. | ± |
| Richmond College, Virginia | 1832 | + | F. | 1903 | + | + | + | S. | (?) | P. | ± |
| Roanoke College, Virginia | 1853 | + | F. | 1897 | + | − | − | S. | A. | F. | + |
| Rochester Agricultural and Mechanical Institute, New York | 1885 | + | F. | 1908 | + | + | + | S. | E. & C. | F. | + |
| St. John's College, Maryland | 1696 | + | S. | 1903 | + | ++ | − | S. | C. | F. | ± |
| St. Olaf College, Minnesota | 1874 | + | F. | 1911 | + | ++ | − | S. | E. | F. | − |
| Shorter College, Georgia | 1873 | + | F. | 1910 | + | + | (?) | S. | E. | F. | + |
| Simmons College, Massachusetts | 1899 | + | F. | 1912 | + | + | − | S. | E. | F. | + |
| Simpson College, Iowa | 1860 | + | S. | 1906 | + | ++ | − | S. & F. | E. | F. | − |
| Smith College, Massachusetts | 1871 | + | S. | 1903 | + | −+ | + | S. | E. | P. | − |
| Southwestern University, Texas | 1873 | + | F. | 1909 | + | + | + | S. | E. & C. | S. | (?) |
| Southwestern Presbyterian University, Tennessee | 1875 | + | S. | 1911 | + | ++ | − | S. | E. | F. | + |
| State University of Kentucky, Kentucky | 1865 | + | S. | 1911 | + | ++ | + | S. | E. | S. | − |
| Stevens Institute of Technology, New York | 1871 | + | S. | 1907 | + | + | + | S. | E. | F. | ± |
| Susquehanna University, Pennsylvania | 1858 | − | F. | 1894 | + | + | − | F. | A. | F. | + |
| Swarthmore College, Pennsylvania | 1869 | + | S. | 1911 | + | + | − | S. | E. | F. | ± |
| Tabor College, Iowa | 1866 | + | F. | 1866 | + | − | + | F. | A. | F. | + |
| Throop Polytechnic Institute, California | 1891 | + | F. | 1910 | + | − | + | S. | E. & C. | F. | ± |
| Tulane University, Louisiana | 1834 | + | F. | 1883 | + | − | + | S. | E. & C. | F. | ± |
| Union University, Tennessee | 1848 | + | F. | 1908 | + | + | − | F. | A. | F. | ± |
| Union College, New York | 1795 | + | S. | 1909 | + | + | − | S. | E. | S. | ± |
| University of Alabama, Alabama | 1831 | + | S. | 1863 | + | ++ | + | S. | E. | F. | + |
| University of California, California | 1860 | + | S. | 1895 | + | − | + | S. | A. | P. | ± |
| University of Cincinnati, Ohio | 1870 | − | F. & S. | 1912 | + | + | − | S. | E. | F. | − |
| University of Louisville, Kentucky | 1837 | − | F. | 1908 | + | − | + | S. | C. | F. | ± |

*Tabular summary as to the use of the honor system*—Continued.

| Institutions. | Institution established. | Exists in all departments (+), or in some departments (−). | Initiative from faculty (F.), or from students (S.), or both. | Year of adoption. | Growing in favor (+), or not (−). | Personal pledge (+), no pledge (−), pledge to report others (++). | System extends beyond examinations (+), or limited to examinations (−). | Administrative council of students (S.), faculty (F.). | Council elected (E.), appointed (A.), automatically chosen (C.). | Final power in students (S.), president (P.), faculty (F.). | Instructor present (+), present at times (±), absent (−). |
|---|---|---|---|---|---|---|---|---|---|---|---|
| University of Michigan, Michigan | 1837 | − | S. | 1903 | + | ++ | − | S. | E. | F. | − |
| University of Mississippi, Mississippi | 1848 | + | S. | 1907 | + | (?) | + | S. | C. | P. | (?) |
| University of North Carolina, North Carolina | 1789 | + | S. | 1863 | + | + | − | S. | E. | F. | + |
| University of Pennsylvania, Pennsylvania | 1740 | − | S. | 1905 | + | + | − | S. | E. | F. | − |
| University of Puget Sound, Washington | 1903 | + | F. | 1910 | + | − | + | S. & F. | E. & C. | F. | ± |
| University of Rochester, New York | 1850 | + | S. | 1912 | + | ++ | − | S. | C. | F. | ± |
| University of South Carolina, South Carolina | 1801 | + | (?) | 1807 | + | −+ | + | S. | E. | S. | ± |
| University of the South, Tennessee | 1857 | + | S. | 1868 | + | (?) | (?) | (?) | (?) | S. | ± |
| University of Tennessee, Tennessee | 1794 | + | (?) | (?) | − | + | + | F. | A. | F. | ± |
| University of Texas, Texas | 1883 | + | S. | 1898 | + | ++ | − | S. | E. | F. | ± |
| University of Transylvania, Kentucky | 1798 | + | S. | 1902 | + | ++ | − | S. | E. & C. | S. | + |
| University of Virginia, Virginia | 1819 | + | tF. | 1842 | + | ++ | − | S. | C. | S. | ± |
| Vincennes University, Indiana | 1806 | + | F. | 1911 | + | ++ | + | F. & S. | A. | P. | ± |
| Virginia Military Institute, Virginia | 1839 | + | F. & S. | 1839 | + | −+ | + | S. | E. | P. | ± |
| Virginia Polytechnic Institute, Virginia | 1872 | + | F. | 1898 | + | ++ | − | S. | C. | F. | + |
| Wake Forest College, North Carolina | 1834 | + | (?) | 1911 | + | + | − | S. | C. | F. | ± |
| Washington and Lee University, Virginia | 1749 | + | S. | (?) | + | + | + | S. | E. | F. | ± |
| Washington University, Missouri | 1853 | + | S. | 1911 | + | + | − | S. | E. | F. | ± |
| Wells College, New York | 1868 | + | S. | 1897 | + | − | + | S. | E. | F. | − |
| Wesleyan University, Connecticut | 1831 | + | S. | 1893 | + | + | − | S. | A. | F. | ± |
| Western College for Women, Ohio | 1855 | + | F. | 1909 | + | −+ | + | S. & F. | E. | F. | ± |
| Western Maryland College, Maryland | 1867 | + | S. | 1910 | + | ++ | − | S. | E. | F. | ± |
| Western Reserve University, Ohio | 1826 | − | S. & F. | 1903 | + | ++ | − | S. | E. & C. | F. | − |
| William and Mary College, Virginia | 1779 | + | F. & S. | 1779 | + | + | + | S. | E. & C. | F. | ± |
| Williams College, Massachusetts | 1793 | + | S. | 1895 | + | ++ | − | S. | E. | F. | ± |
| Wilson College, Pennsylvania | 1870 | + | S. | 1905 | + | ++ | + | S. | C. | F. | − |
| Wofford College, South Carolina | 1854 | + | S. | 1912 | + | − | + | S. | C. | F. | − |
| Yale University, Connecticut | 1701 | − | S. | 1912 | + | + | − | S. | E. | F. | − |

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# APPENDIX.

## A. TYPE CONSTITUTIONS.

### PRINCETON UNIVERSITY.

### Article I.

Section 1. There shall be a committee consisting of six members who shall represent the student body and deal with all cases involving violations of the honor system.

Sec. 2. The members of this committee shall be the presidents of the four classes, and two others, one a member of the senior class and one a member of the junior class.

Sec. 3. The president of the senior class shall be chairman of the committee, and the president of the junior class shall be clerk.

### Article II.

Sec. 1. Early in the fall of each year, immediately after the election of the officers of the four classes, the chairman of the committee shall convene the presidents of the three other classes and that member of the senior class who served as the elected junior member on the previous committee, and they shall complete their number by the election of one member from the junior class.

Sec. 2. If this member of the junior class be afterwards elected president of his class, or be otherwise incapacitated from holding the office, a member of the same class shall be chosen to fill the vacancy according to the method of section 1.

Sec. 3. If action of the committee becomes necessary before the fall elections of the class presidents have taken place, the four presidents at that time, together with the senior member who had served in his junior year, will constitute a temporary committee for the particular cases, with the same regulations of powers, procedure, and penalties adopted in this constitution.

### Article III.

Sec. 1. The committee shall have the power to summon the accused persons and witnesses and conduct a formal investigation, and in case of conviction the penalty shall be recommendation to the faculty of the separation from college of the man convicted, with the addition in extreme cases of publication to a mass meeting of the college.

Sec. 2. The committee shall make a single report to the faculty of all cases acted upon during one series of examinations, consisting of a brief résumé of evidence taken, their decision in the case, and the recommendation of the penalty to be imposed.

Sec. 3. The committee may at any time summon a mass meeting for instruction or to support their action in any disputed question, or to report the name and case of any extreme offender.

### Article IV.

Sec. 1. The place and time of meeting shall be left to the chairman of the committee.

Sec. 2. The trial shall be formal and conducted in the following manner, with the president of the senior class as the chairman, and the president of the junior class as clerk: Witnesses against the accused shall be taken first and then testimony taken in full. The accused shall be called separately and allowed to make his statement, presenting witnesses for his defense. All witnesses and the accused may be questioned by members of this committee and a decision then rendered according to the law and evidence.

Sec. 3. Five of the six votes shall be necessary to conviction.

Sec. 4. All evidence possible shall be procured in every case, and in no event shall a man be tried the second time for the same offense except in the light of new and important evidence.

### Article V.

Sec. 1. Violations of the honor system shall consist of any attempt to receive assistance from written aids or from any person or paper, or in any attempt to give assistance, whether the one so doing has completed his own paper or not. This rule holds both within and without the examination room during the entire time the examination is in progress; that is, until all papers have been handed in.

Sec. 2. Violations shall also consist in obtaining or attempting to obtain previous to any examination copies of the examination papers or the questions to appear thereon, or to gain any illegal knowledge of these questions.

Sec. 3. Any man not signing the pledge placed on the examination paper will be notified by the professor holding the examination, and if unable then to sign he will be reported to the committee for investigation.

### Article VI.

The several committees shall keep a record of all cases acted upon in their sessions, without mentioning names of the accused, also a record of successive actions of mass meetings with respect to the honor system. These records, together with the constitution, shall be preserved by the senior member of the committee of each year for the instruction of that committee.

### Article VII.

This constitution may be amended by a three-fourths vote of those present at a mass meeting of the college.

### Article VIII.

This constitution shall be published in the Daily Princetonian during the first month of each college year.

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## CORNELL UNIVERSITY.

### Article I.

(A) This honor system shall apply to students in all courses given in the College of Agriculture and, pending the adoption of an honor system by the other colleges, to all agricultural students in such colleges.

### Article II.

(A) All students shall be given an opportunity to sign these articles, and if a majority of students shall sign them they shall hold for all students. New students shall each year be given an opportunity to sign these articles.

(B) Students thus included shall be on their honor to refrain from "cribbing" in classrooms and examinations.

(C) Students shall personally reprimand any violation and report the offense to the student committee as defined hereinafter.

### ARTICLE III.

(A) The committee shall be known as the "Committee on student honor."

(B) The committee shall consist of three (3) seniors, two (2) juniors, one (1) sophomore, and one (1) freshman.

(C) The chairman shall be elected from the committee by them at their first meeting at the beginning of each college year.

(D) The senior, junior, and sophomore members shall be elected from their respective classes at meetings held at the first agricultural assembly of each college year.

(E) The freshman member shall be selected by this committee during the following December.

(F) The chairman shall fill vacancies in the committee by appointment.

(G) The committee shall also serve until their successors are appointed.

### ARTICLE IV.

(A) It shall be the duty of the chairman to record all offenses reported; to call meetings of the committee when necessary; and to act in accordance with the finding of the committee.

(B) It shall be his further duty to notify a student of any offense reported against him, and to bring his case before the committee immediately.

(C) The chairman shall have no vote upon any question except in case of a tie.

### ARTICLE V.

(A) It shall be the duty of the committee to pass upon all evidence relating to cases brought before it.

(B) The conviction of an offense shall be made only upon the unanimous vote of the committee present.

(C) It shall be the duty of the committee, if they find the offense of sufficient gravity, to require the withdrawal of the student from the university for such a length of time as may be deemed just. But if the offense be less serious, or the circumstances ameliorating, the student may be deprived of credit either for the course or the examination in question. And in case of failure to comply with the decision, the committee shall report the case to the proper authorities.

### ARTICLE VI.

(A) In case the chairman or the member of the committee be reported, his place shall be deemed vacant and shall be filled in accordance with the provisions of Article III, Section B; if, however, he be found innocent, he shall resume his former position.

### ARTICLE VII.

(A) The findings of the committee shall be published in the university press, but all names shall be withheld.

### ARTICLE VIII.

(A) Amendments to or alterations of these articles shall be binding when adopted by a majority vote of the entire number of students in the College of Agriculture regularly assembled, provided that one week's notice of this action shall have been given.

### ARTICLE IX.

(A) The pledge which all students shall be asked to sign shall be as follows:

"I hereby pledge upon my honor to abide by the conditions of the above articles, provided they are adopted by a majority of the students of the College of Agriculture."

## B. TYPE PLEDGES.

**Hamilton College, Clinton, N. Y.:**

"I have neither given nor received aid in this examination."[1]

**Miami University, Oxford, Ohio:**

"I pledge myself to support the honor system to the utmost of my ability, and not only myself to act in accordance with what I conscientiously believe to be its spirit, but also to encourage others to do the same."

**Ohio Wesleyan University:**

"In view of the introduction of the honor system in Ohio Wesleyan University, I pledge myself to support that system to the utmost of my ability, and not only myself to act in accordance with what I conscientiously believe to be its spirit, but also to encourage others to do the same and strongly to discountenance any violation of it."

**University of Texas:**

"I have upon my honor neither given nor received help in this examination, neither have I seen any one else give or receive help."

**University of Virginia:**

"I, A. B., do hereby certify on honor that I have derived no assistance during the time of this examination from any source whatever, whether oral, written, or in print, in giving the above answers."

**Wake Forest College, Wake Forest, N. C.:**

"I have neither given nor received help from any source."

**Wilson College, Chambersburg, Pa.:**

"I hereby pledge my honor as a student of Wilson College that I will endeavor to abide by all rules of the student government association; that I will do no dishonest work in daily preparations and recitations, nor in written work, and that I will report to the honor board of the self-government association any dishonest work that comes to my notice."

## C. MEMBERSHIP OF TYPE ADMINISTRATION COUNCILS.

Amherst College:
  Class presidents.
  1 member of the senior class.
  1 member of the junior class.

Denison University:
  3 seniors.
  2 juniors.
  1 sophomore.
  1 freshman.

Hobart College:
  1 upper classman from each fraternity.
  1 from the nonfraternity men.

Lehigh University:
  Members of the "Arcadia," a club of 15 members composed of the highest officer of each organization.
  3 lower class officers.

Randolph-Macon Woman's College:
  President and vice president from seniors of each dormitory.
  Secretary from juniors.
  Treasurer from sophomores.

Tulane University:
  All officers of classes.
  President of student body.
University of the South, Sewanee, Tenn.:
  3 from theological department.
  3 from senior class.
  3 from junior class.
  2 from sophomore class.
  2 from freshman class.
Wells College:
  2 members from each class.
Wofford College:
  Presidents of classes.
  2 men from each class elected by presidents.

UNITED STATES BUREAU OF EDUCATION

BULLETIN, 1915, NO. 9 - - - - - - WHOLE NUMBER 633

# MONTHLY RECORD OF CURRENT EDUCATIONAL PUBLICATIONS

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## INTRODUCTORY NOTES.

The following are 10 noteworthy books of the current month, the numbers in parentheses referring to the numbers of the full entries in this bulletin: National education association, Journal of proceedings and addresses, 1914 (156); National society for the study of education, Fourteenth yearbook, Part I (157); General education board, Account of its activities, 1902–1914 (167); Earhart, Types of teaching (177); Thorndike, Teachers' estimates of the quality of specimens of handwriting (197); Hayward, Lesson in appreciation—Pedagogics of beauty (219); Pennsylvania state educational association, Report on rural schools (247); Stewart, Cooperative methods in development of school support (283); Burgerstein, School hygiene (298); Women's educational and industrial union, The public schools and women in office service (339).

Only publications of the Bureau of Education are available for free distribution by this office. All others here listed may ordinarily be obtained from their respective publishers, either directly or through a dealer, or, in the case of an association publication, from the secretary of the issuing organization.

Books, pamphlets, etc., intended for inclusion in this record should be sent to the library of the Bureau of Education, Washington, D. C.

## PUBLICATIONS OF ASSOCIATIONS.

154. **American school peace league.** Year book, 1913–1914. 139 p. 8°. (Mrs. Fannie F. Andrews, secretary, Boston, Mass.)

Contains: Emma Feldbaum: The opportunity and duty of the schools in the International peace movement, p. 107–18.

155. **National council of teachers of English.** [Papers and proceedings of the fourth annual meeting, Chicago, November 26–28, 1914] English journal, 4: 1–74, January 1915.

Contains: 1. F. T. Baker: High-school reading: compulsory and voluntary, p. 1–8. 2. E. A. Thurber: Composition in our colleges, p. 9–14. 3. R. F. Lockridge: A new idea in high-school discussion contests, p. 15–20. 4. W. D. Johnston: The relation of the library to the teaching of English, p. 21–27. 5. Three reports to the National council of teachers of English—I. Scientific standards in English teaching, p. 28–34; II. Report of the committee on plays in schools and colleges, p. 34–40; III. Report of the committee on English in the country schools, p. 41–46. 6. [Proceedings, with abstracts of some of the papers] p. 47–74.

156. **National education association of the United States.** Journal of proceedings and addresses of the fifty-second annual meeting, held at St. Paul, Minnesota, July 4–11, 1914. Ann Arbor, Mich., The Association, 1914. 928 p. 8°. (D. W. Springer, secretary, Ann Arbor, Mich.)

*General Sessions.*

Contains: 1. Joseph Swain: The relation of the teacher to American citizenship, p. 29–35. 2. The status of woman—L. K. Mathews: Training women for social responsibility, p. 40–45; Sophonisba P. Breckinridge: Some aspects of the public school from a social worker's point of view, p. 45–51; Emma M. Perkins: The humanities, old and new, p. 51–56; Mary E. Woolley: Preparation of women for twentieth-century life, p. 56–60. 3. Teachers' salaries and pensions—C. W. Dabney: The college professor and the nation, p. 60–66; Grace C. Strachan: Salaries based on the position and not on the sex of incumbent, p. 66–71; W. I. Hamilton: Teachers' retirement allowances, p. 71–78. 4. Scott Nearing: The public-school teacher and the standard of living, p. 78–92. 5. Principles and aims of education—W. L. Bryan: Common-sense and beyond, p. 94–98; N. C. Schaeffer: The purpose of elementary and high-school education, p. 98–101; Alexander Meiklejohn: The purpose of the liberal college, p. 102–3. 6. Education in a democracy—E. A. Ross: Education for social service, p. 103–6; W. O. Thompson: Education for political and moral service, p. 106–12. 7. The needs of the public schools—J. W. Cook: Professionally prepared teachers, p. 113–15; J. M. Greenwood: The kingdom of little things, p. 115–18; L. D. Harvey: Systematic education for those pupils leaving school too soon, p. 119–22; E. T. Fairchild: Progress of the rural schools, p. 122–25; C. G. Pearse: Let both grow together until the harvest; p. 125–28; J. Y. Joyner: The adaptation of the work of the school to the needs of the people, p. 129–31.

*Department of Superintendence (Richmond meeting, 1914).*

8. E. T. Devine: Education and social economy, p. 142–50. 9. Fundamental distinctions between liberal and vocational education [by] David Snedden, p. 150–61; [by] W. C. Bagley, p. 161–70. 10. R. J. Condon: School and shop—work and stüdy, p. 171–75. 11. F. W. Thomas: The apprentice schools of the Santa Fe railway system, p. 175–84. 12. Josephine C. Preston: Some conditions in rural schools and their improvement, p. 189–93. 13. Cora W. Stewart: The moonlight schools of Kentucky, p. 193–99. 14. E. L. Thorndike: The foundations of educational achievement, p. 199–206. 15. W. A. Jessup: Economy of time in arithmetic, p. 209–22. 16. A. D. Yocum: The determinants of the course of study, p. 223–35. 17. J. W. Withers: How the course of study should be determined, p. 235–43. 18. E. P. Cubberley: Rural-school administration, p. 244–50. 19. Payson Smith: Dangers of overorganization of the rural schools, p. 253–57. 20. Interrelation of the office of state superintendent and that of county superintendent [by] F. G. Blair, p. 257–60; [by] O. J. Morelock, p. 260–63. 21. The function of the school to the community it serves—A. Its scholastic function [by] J. M. Gwinn, p. 264–66; B. Its social function [by] J. M. Greenwood, p. 266–69. 22. E. D. Pusey: Testing grade teachers for efficiency, p. 283–86.

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23. Minimum sanitary requirements for rural schools, p. 295–301. 24. G. D. Strayer: Report of the committee on tests and standards of efficiency in schools and school systems—a brief statement concerning the purpose, nature and conduct of school surveys, p. 302–6; Discussion, p. 306–10. 25. C. S. Meek: The public-school survey, p. 310–14. 26. Sex hygiene—A. Wanted—a twentieth-century ideal [by] Grace C. Strachan, p. 317–18; B. Sex hygiene—what the schools can do [by] C. G. Pearse, p. 318–22; Discussion, p. 322–25. 27. Co-operating forces for the improvement of rural school conditions [by] A. H. Chamberlain, p. 327–32; [by] Margaret E. Schallenberger, p. 332–37; [by] C. P. Cary, p. 338–40; [by] Adelaide S. Baylor, p. 340–42; [by] D. B. Johnson, p. 342–44. 28. Superintendent problems [by] J. W. Carr, p. 344–49; [by] L. E. Wolfe, p. 349–54; [by] W. R. Siders, p. 354–56; [by] John Macdonald, p. 356–58; [by] David Felmley, p. 358–61. 29. J. W. Cook: Some positive educational gains in the last decade, p. 369–75. 30. Harmonizing vocational and cultural education [by] Josephine C. Preston, p. 375–78; [by] H. H.

Seerley, p. 378-80; [by] G. W. A. Luckey, p. 380-83; [by] J. W. Crabtree, p. 384-85; [by] J. W. Cook, p. 385-86. 31. Economy of time in education [by] Frank Strong, p. 386-90; [by] H. B. Wilson, p. 390-95; [by] E. G. Blair, p. 395-97; [by] L. D. Harvey, p. 397-401; [by] V. E. E. Scribner, p. 401-404.

### *Department of Kindergarten Education.*

32. M. P. E. Groszmann: Adaptation of the work of the kindergarten to the needs of individual children, p. 406-13. 33. Myra M. Winchester: What the United States Bureau of education is doing for the kindergarten, 413-15. 34. Georgia Alexander: Standardizing the work in the kindergarten and elementary schools, p. 415-20.

### *Department of Elementary Education.*

35. The individual child in his individual needs: the school life of the child—A. Self-expression in the school [by] J. W. Searson, p. 422-27; B. Preparation for service thru the school [by] N. C. Macdonald, p. 427-30. 36. The individual child and individual needs: the home life of the child—A. Self-expression in society [by] Julia F. Walker, p. 430-34; B. Self-protection thru knowledge and habit [by] Margaret E. Schallenberger, p. 435-39; C. Constructive civic agencies [by] E. J. Ward, p. 439-43.

### *Department of Secondary Education.*

37. E. G. Cooley: Bishop Grundtvig and the people's high schools, p. 451-59. 38. E. G. Allen: Some things worth while in industrial education in secondary schools, p. 465-70. 39. R. E. Blount: The responsibility of the teacher with regard to the teaching of sex hygiene, p. 470-75. 40. J. E. Peabody: Some experiments in sex education, p. 475-81. 41. C. D. Kingsley: Problems confronting the Commission on the reorganization of secondary education, p. 483-88.

### *Department of Higher Education.*

42. Frank Strong: Religious education in universities, p. 489-93.

### *Department of Normal Schools.*

43. David Felmley: The reorganization of the normal-school curriculum, p. 498-504. 44. The preparation of teachers and supervisors for the industrial branches and other special lines [by] L. J. Corbly, p. 505-9; [by] J. W. Crabtree, p. 509-13. 45. Extension work in normal schools [by] E. T. Mathes, p. 513-15; [by] H. C. Minnich, p. 516-19; [by] H. G. Williams, p. 519-23. 46. H. H. Seerley: The preparation of teachers for high schools, p. 529-32. 47. J. J. Doyne: The preparation of teachers for rural schools, p. 532-36. 48. J. W. Cook: The practice school and the work of the heads of departments in it, p. 541-48. 50. J. W. Brister: How can normal schools best help the forward movement in rural life? p. 548-52. 51. A. C. Thompson: Notable shortcomings of state normal schools, p. 554-59. 52. W. H. Cheever: The content of the course in sociology in a normal school, p. 559-60; Discussion, p. 560-64.

### *Department of Vocational Education and Practical Arts.*

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### *Department of Music Education.*

60. P. W. Dykema: Community music—an opportunity, p. 627-33. 61. J. B. Cragun: A psychological analysis of the basis on which credit for the study of music is to be placed, p. 635-41. 62. P. C. Lutkin: When music fulfills its highest function, p. 641-47.

### *Department of Business Education.*

63. E. J. Glade: The present status of business education in the United States and some recommendations, p. 652-56. 64. R. V. Coffey: Preparatory educational requirements for collegiate training in business, with special reference to articulation between the high-school and college courses, p. 657-62.

### *Department of Child Hygiene.*

65. L. N. Hines: Some phases of the health supervision of schools, p. 663–68. 66. L. W. Rapeer: Industrial hygiene and vocational education, p. 668–72. 67. H. M. Bracken: The health administration of schools, p. 672–77. 68. S. S. Colvin: The attitude of the child in learning, p. 677–82.

### *Department of Physical Education.*

69. C. G. Rathman: Physical care and training of children in European schools, p. 684–91. 70. Shall sex hygiene be taught in the public schools? [by] C. H. Keene, p. 695–97; [by] Mabel M. Wright, p. 697–701. 71. W. P. Hubert von Blijenburgh: Swedish gymnastics in American schools, p. 707–13.

### *Department of Science Instruction.*

72. G. R. Twiss: The outlook for the application of the scientific method to the problems of science teaching, p. 723–28. 73. R. H. Whitbeck: Geography in the large high school, p. 732–37. 74. W. J. Sutherland: Geography in village and rural schools, p. 738–42. 75. A. H. Saunders: Motion pictures as an aid to education, p. 743–45; Discussion, p. 746–48. 76. The tendencies and general status of courses in general science; [by] W. H. Timbie, p. 752–58; [by] F. D. Barber, p. 758–64.

### *Department of School Administration.*

77. J. M. Ingold: The heating, lighting, and ventilating of school buildings, p. 779–83. 78. J. M. Malmin: A state teachers' employment agency under the supervision of the department of public instruction, p. 785–87. 79. E. T. Critchett: The success of a state teachers' employment agency law after two years, p. 787–89.

### *Library Department.*

80. H. A. Wood: A standard foundation library for a rural school, p. 798–801. 81. Delia G. Ovitz: Training of rural teachers in the use of books, p. 802–7. 82. W. D. Johnston: The newspaper morgue, the library and the school, p. 810–13. 83. P. B. Wright: High-school branches of public libraries, p. 820–23. 84. Mary E. Hall: Report of committee on high-school libraries, p. 823–26.

### *Department of Special Education.*

85. L. R. Alderman: An effort to make the school fit the needs of the exceptional child, p. 830–34. 86. J. W. Carr: A practical experiment with backward children, p. 844–48.

### *Department of School Patrons.*

87. P. P. Claxton: Rural-school improvement, p. 854–55. 88. The responsibility of school patrons with regard to school questions—A. School health [by] Maggie W. Barry, p. 865–70; B. School revenue [by] F. G. Blair, p. 870–75.

### *Department of Rural and Agricultural Education.*

89. H. H. Seerley: Rural demonstration schools and study-center work for rural teachers, p. 878–81. 90. The course in agriculture for training teachers in normal training high schools [by] J. L. McBrien, p. 890–95; [by] A. V. Storm, p. 895–98. 91. O. H. Benson: The federated boys' and girls' club work, p. 898–905. 92. J. W. Crabtree: What recognition should be given vacation and other out-of-school work? p. 905–7.

157. **National society for the study of education.** Fourteenth yearbook. Part I. Minimum essentials in elementary-school subjects—standards and current practices. Chicago, Ill., University of Chicago press [1915] 162 p. 8°. (S. Chester Parker, secretary, University of Chicago, Chicago, Ill.)

Contains: 1. H. B. Wilson, chairman: The minimum essentials in elementary-school subjects. Report of the committee on economy of time, p. 9–20. 2. H. W. Holmes: Time distributions by subjects and grades in representative cities, p. 21–27. 3. F. E. Thompson: Typical experiments for economizing time in elementary schools, p. 28–36. 4. R. G. Jones: Standard vocabulary, p. 37–43. 5. S. A. Courtis: Standards in rates of reading, p. 44–58. 6. W. S. Gray: Selected bibliography upon practical tests of reading ability, p. 59–60. 7. F. N. Freeman: Hand-writing, p. 61–77. 8. H. C. Pryor: Spelling, p. 78–89. 9. J. F. Hosic: The essentials of composition and grammar, p. 90–115. 10. W. A. Jessup: Current practices and standards in arithmetic, p. 116–30. 11. W. C. Bagley: The determination of minimum essentials in elementary geography and history. p. 131–46 12. J. F. Hosic: The essentials of literature, p. 147–52.

158. **Washington educational association.** Addresses and proceedings of the twenty-eighth annual session, held in Tacoma, October 28–31, 1914. 227 p. 8°. (O. C. Whitney, secretary, Tacoma, Wash.)

Contains: C A. Prosser: The meaning of vocational education, p. 45–51. 2. C. A. Prosser: The democratizing of education, p. 51–58. 3. C. E. Rugh: The teacher's day of work and recreation, p. 58–61. 4. C. E. Rugh: The school has become a fundamental social institution, p. 62–66. 5. C. R. Frazier: Shall elementary schools be reorganized, p. 76–80. 6. C. W. Hodge: School district reorganization, p. 81–86. 7. H. D. Johnson: English teaching. Causes of the widespread dissatisfaction with the results obtained in high schools, p. 95–99. 8. S. E. Tift: The six-and-six plan of grading, p. 102–9. 9. W. M. Kern: The junior-senior high school, p. 110–12. 10. G. C. Howard: The two-period plan of study and recitation, p. 113–17; Discussion, p. 117–21. 11. W. T. McDermott: The kind of art training needed in home economics department, p. 123–27. 12. S. L. Boothroyd: The necessity for science training in our public schools, with special reference to the first year of high school, p. 138–44. 13. E. L. Holton: Education for social and vocational efficiency, p. 153–55. 14. Stephen Dwan: Vocational guidance in its relation to the commercial department, p. 161–64. 15. C. A. Prosser: The pre-vocational school, p. 167–79. 16. H. Z. Wilbur: Problems in English teaching, p. 186–92. 17. J. K. Hart: The general social life of the community, p. 194–99. 18. Curtis Merriman: Chapters from modern psychology of special importance to rural teachers, p. 200–206.

159. **West Virginia education association.** Proceedings ... held in Morgantown, W. Va., June 17–19, 1914. Forty-fourth annual session. 250 p. 8°. (A. P. Morrison, secretary, Clarksburg, W. Va.)

Contains: 1. O. G. Wilson: Present day movements in education and their possibilities for moral development, p. 23–28. 2. A. P. Bourland: The Southern movement for a free rural school, p. 28–32. 3. M. P. Shawkey: Educational realizations in West Virginia, p. 32–40. 4. Joseph Rosier: Present day needs in the city school curriculum, p. 40–47. 5. L. B. Hill: The training of elementary teachers, p. 53–59. 6. L. F. Hanmer: Recreation and the public schools, p. 59–64. 7. J. L. Henderson: Changes in the curriculum, p. 64–74. 8. Oliver Shurtleff: The social center—how it may be realized. Some results. Recapitulation, p. 75–79. 9 L. L. Friend: How can our rural high schools better meet the needs of rural communities? p. 109–16. 10. C. W. Jackson: How can our schools improve the physical efficiency of the pupils? p. 116–21. 11. G. H. Colebank: Modern tendencies in secondary school freedom and responsibility, p. 131–36. 12. C. B. Clark: Greater efficiency in teaching in the elementary grades, p. 148–52. 13. Lou Shaffer: The moving picture problem, p. 152–58. 14. C. S. Lawson: Social center work, p. 164–70. 15. W. S. Deffenbaugh: Departmental teaching in the grammar school grades, p. 170–80. 16. W. C. Morton: How to make a county superintendent's visit worth while, p. 209–14. 17. Joseph Rosier: What are the weaknesses of normal school graduates as beginners, p. 222–28.

## EDUCATIONAL HISTORY.

160. **Bevan, J. O.** University life in the olden time; monasticism and other essays. London, Chapman & Hall, ltd., 1914. 252 p. 12°.

161. **Birchenough, Charles.** History of elementary education in England and Wales from 1800 to the present day. London, W. B. Clive, 1914. 394 p. illus. 16°.

162. **Cornill, Carl Heinrich.** The culture of ancient Israel. Chicago [etc.] The Open court publishing co., 1914. 167 p. illus. 12°.

Contents.—Rise of the people of Israel (tr. by A. H. Gunlogsen).—Moses, the founder of monotheistic religion (tr. by Lydia G. Robinson).—The education of children in ancient Israel (tr. by W. H. Carruth).—Music in the Old Testament (tr. by Lydia G. Robinson).—The Psalms in universal literature (tr. by W. H. Carruth).—Index.

163. **Little, Andrew George,** *ed.* Roger Bacon essays contributed by various writers on the occasion of the commemoration of the seventh centenary of his birth. Oxford, Clarendon press, 1914. 425 p. 8°.

Contents.—1. Introduction: On Roger Bacon's life and works, by A. G. Little.—2. Der einfluss des Robert Grosseteste auf die wissenschaftliche richtung des Roger Bacon, von Ludwig Baur.—3. La place de Roger Bacon parmi les philosophes du xiiie siècle, par François Picavet.—4. Roger Bacon and the Latin Vulgate, by Cardinal Gasquet.—5. Roger Bacon and philology by S. A. Hirsch.—6. The place of Roger Bacon in the history of mathematics, by D. E. Smith.—7. Roger Bacon und seine verdienste um die optik, von Eilhard Wiedemann.—8. Roger Bacon's lehre von der sinnlichen spezies und vom sehvorgange, von Sebastian Vogl. 9. Roger Bacon's art des wissenschaftlichen arbeitens, von J. Würschmidt.—10. Roger Bacon et l'horreur du vide, par Pierre Duhem.—11. Roger Bacon: his relations to alchemy and chemistry, by M. M. P. Muir.—12. Roger Bacon and gunpowder, by H. W. L. Hime.—13. Roger Bacon and medicine, by E. Withington.—14. Roger Bacon in English literature, by J. E. Sandys.—Appendix: Roger Bacon's works, with references to the mss. and printed editions, by A. G. Little.

## CURRENT EDUCATIONAL CONDITIONS.

164. **Armani, Tarquinio.** L'attività legislativa di un pedagogista (Luigi Credaro). Rivista pedagogica, 7:955–1026, December 1914.

Reviewing the legislative work of the founder of the Rivista pedagogica, the writer virtually presents a survey of the present status of education in Italy.

165. **Bourquin, Louis.** L'école chinoise. Revue pédagogique, 65:261–76, December 1914.

An historical account of the rise of the new Chinese school and a characterization of the aims and methods of the new education in China.

166. **Brandon, Edgar E.** Recent educational tendencies in Argentina. Education, 35:362–65, February 1915.

Dwells on the Argentine high school of to-day. Advocates democracy in secondary education.

167. **General education board.** An account of its activities, 1902–1914. New York, General education board, 1915. xv, 240 p. illus. maps. 8°.

Explains in detail the history of the board, its relations to other boards and foundations, and its work for higher education and education in the South; resources and expenditures of the board; farm demonstration; aid in developing high schools in the South; and the policy of the board toward colleges and universities. Special chapters treat of medical education, rural education, and negro education. The cooperation of the board with State and Federal Governments is carefully described. The appendices include the Act of Congress incorporating the General education board; letters of Mr. John D. Rockefeller in regard to the gifts; and contracts entered into as a result of gifts to Washington university and Yale university. The report is abundantly illustrated.

168. **Larreinaga, M.** La instrucción pública en Guatemala, su pasado, su presente y su organización. Revista de instrucción pública, 1:281–90, July–August 1914.

Prepared for inclusion in a book on Guatemala for the Panama-Pacific exposition.

169. **Milburn, James B.** Belgium and her elementary schools. Catholic educational review, 9:97–112, February 1915.

Belgium, in May last, passed a law "which marked the close of a long, and, to some extent, bitter struggle between the partisans of neutrality and secularism on the one side, and on the other of a Catholic government and its supporters who were anxious and determined to give all an equality of educational opportunity." The author explains how the need for the law came about, and how the problem was solved.

170. **Pearse, C. G.** Cleveland and its schools. The city which forbids its teachers to join unions. American school, 1:7–11, January 1915.

The scope, organization, and administration of the school system of Cleveland.

171. **Schwartz, E.** Ist der krieg ein hindernis für die durchführung des neuen grundlehrplans vom achten dezember 1913? Pädagogische zeitung, 43:819–21, November 26, 1914.

Argues in favor of introducing the new curriculum in the schools of Berlin, despite the war.

172. Situation de l'enseignement primaire au 1er décembre 1914. Revue pédagogique, 65:292–95, December 1914.

A statement regarding the pupil enrollment in France in the normal, higher primary, and primary schools, and concerning the teaching personnel in these schools.

## PEDAGOGICS AND DIDACTICS.

173. **Adamson, Elizabeth Winifred.** The school, the child and the teacher; suggestions for students in training, written with special reference to the work in South African schools. London, New York [etc.] Longmans, Green and co., 1915. xii, 394 p. 12°.

Contains bibliographies.

174. **Bowden, Witt.** Education for the control and enjoyment of wealth. Educational review, 49:147–67, February 1915.

Discusses the development of direct vocational and semi-vocational training; the socialization of the curriculum; cultural values of industrial education, etc. Efforts of the state universities to democratize higher education.

175. **Brumbaugh, Martin G.** What is thoroughness in education? Teacher, 19: 16–18, 20, January 1915.

"From Dr. Brumbaugh's Annual report for the year ending December 31, 1913. A study of certain educational fundamentals. It should be read and studied by every teacher."—Editor.

176. **Croiset, Alfred.** La civilisation française. Revue internationale de l'enseignement, 34:248–55, November–December 1914.

An address made at the opening of the University of Paris, November 5, 1914.

A subtle distinction is drawn between French and German civilization. Of greatest interest to educators is, perhaps, the application of Pascal's distinction between "l'esprit de finesse" and "l'esprit géometrique."

177. **Earhart, Lida B.** Types of teaching. With an introduction by H. Suzzallo. Boston, New York [etc.] Houghton Mifflin company [1915] xvi, 277 p. 12°.

"A reinterpretation of teaching procedure, stated, as far as possible, in the current and familiar phraseology of ordinary teachers, yet taking into account the recent investigations of our ablest educational thinkers."

178. **Hillyer, Virgil M.** Child training; a system of education for the child under school age. New York, The Century co., 1915. xxxix, 299 p. illus. 8°.

179. **Holmes, Edmond Gore Alexander.** In defence of what might be. London, Constable & company ltd., 1914. vii, 376 p. 8°.

180. **Perry, John.** The need of a science of education. School and society, 1: 114–26, January 23, 1915.

From the address of the president of the Educational science section of the British association for the advancement of science, Australia, 1914.

Condemns the practice in British schools of requiring the classics rather than a good foundation in the English language.

181. **Perry, Ralph B.** A defence of liberal education. Forum, 53: 213–22, February 1915.

Says that the value of a liberal education can not be estimated by the standards of success or efficiency. To profit most by such an education one needs "freedom and elasticity of mind." "Liberal education . . . is the sort of education that helps one to choose one's work freely, rather than the kind of education that fits one for one's chosen work."

182. **Puncheon, Katharine E.** The place of vocational and liberal studies in 1914. Education, 35: 341–49, February 1915.

A plea for cultural studies, to supplement eye and hand training. Deprecates the substitution of *things* for *thoughts*. Regards the exploitation of vocational training to the exclusion of every other kind of education as pernicious.

183. **Sanders, Frederic W.** The organization of education. Education, 35: 371–77, February 1915.

Discusses the normally developing child of average ability. Urges cooperation between school authorities and employers of labor in a given community, in reference to the question of expense. Says it would be possible "to relieve the parents (as well as the public) of all expense for the support of their children after they had completed the secondary transition year (at about 14 years of age), and yet enable the latter to carry their secondary education as far as they might wish to carry it."

Continued from December number.

184. **Schmidkunz, Hans.** Pädagogische phänomenologie. Lehrproben und lehrgänge, 1915, 1. heft: 77–96.

A somewhat difficult discussion which fruitfully correlates some philosophical doctrines and tendencies of the last two decades ("gegenstandstheorie" of A. v. Meinong; "Phänomenologie" of E. Husserl) with changes in pedagogical theory and practice.

185. **Schmidt, Max.** Pädagogische ideale der gegenwart. Allgemeine deutsche lehrerzeitung, 66: 429–32, December 4, 1914.

Considers the community ideal, personality as the ideal, and the biological ideal.

## EDUCATIONAL PSYCHOLOGY; CHILD STUDY.

186. **Ayres, Leonard P.** A scale for measuring the quality of handwriting of adults. New York city, Division of education, Russell Sage foundation [1915] 11 p. fold. chart. 8°. (Pamphlet E138)

187. **Ballou, Frank W.** The function of a department of educational investigation and measurement in a city school system. School and society, 1: 181–90, February 6, 1915.

Read before Section L, American association for the advancement of science, Philadelphia, December, 1914.

188. **Beyer, Thomas P.** The vocabulary of two years. Educational review, 49: 191–203, February 1915.

189. **Hinckley, Alice C.** The Binet tests applied to individuals over twelve years of age. Journal of educational psychology, 6: 43–58, January 1915.

"The results of a study made at the New York clearing house for mental defectives. The author finds that the difficulties of the Binet scale do not increase regularly with each year, but that there are decided jumps at various points. There is an even greater irregularity in the difficulty of the individual tests within a given age-group."

190. **Minnick, J. H.** A comparative study of the mathematical abilities of boys and girls. School review, 23: 73–84, February 1915.

Investigations made at the Bloomington high school, Bloomington, Ind. Gives tables of statistics. Concludes that girls are the equals of boys although they "do not excel to the same degree in mathematics as they do in some of the other subjects, especially in language and English." Compares the mathematical work of boys and girls in college.

191. **Montori, Arturo.** Tipos de apercepción en un grupo de niñas cubanas. Habana, Imp. de "Cuba pedagógica," 1915. 164 p. illus. 8°. (Biblioteca de "Cuba pedagógica")

192. **Oberholtzer, E. E.** Testing the efficiency in reading in the grades. Elementary school journal, 15: 313–22, February 1915.

Tests made in the Tulsa city schools, Oklahoma. Tabulations showing results. Says there seems to be "a definite correlation of the rate of reading among the grades, the rate of silent reading increasing most rapidly as the grade advanced. This is perhaps due largely to the child's being thrown more on his own responsibility; also to the *fact* that he realizes more fully the value of silent reading in giving him control over the printed page and in acquiring information."

193. **Pfister, O.** Psychoanalysis and the study of children and youth. American journal of psychology, 26: 130–41, January 1915.

Discusses "a method established by Prof. Sigmund Freud, of Vienna, which, without resorting to hypnosis, investigates the unconscious contents and motive forces of the mind."

194. **Prüfer, Johannes.** Das "Archiv für erziehungserfahrungen" an der Hochschule für frauen in Leipzig. Zeitschrift für kinderforschung, 19: 711–13, September 1914.

The director of the Leipzig Hochschule für frauen describes the plans of an establishment connected with the institution which will collect, scientifically, data on pedagogical experience with individual children. The design is "psychographic," that is, determined by the procedures of individual or differential pyschology.

195. **Rugg, Harold Ordway.** A scale for measuring free-hand lettering. Journal of educational psychology, 6: 25–42, January 1915.

"Describes the method of constructing the scale, presents the scale itself, and gives an account of its use by eight teachers and over three hundred students of mechanical drawing."

196. **Starch, Daniel.** The measurement of efficiency in reading. Journal of educational psychology, 6: 1–24, January 1915.

"The author presents a graded series of samples for testing the silent reading of elementary school children, discusses the critical points in scoring the rate of reading and the amount reproduced, and gives the results of tests in fifteen schools. Norms of speed and comprehension are worked out for the different grades, and illustrative samples of deviation from these norms are presented."

197. **Thorndike, Edward L.** Teachers' estimates of the quality of specimens of handwriting. New York city, Teachers college, Columbia university, 1914. 13 p. fold. facsims., fold. tables. 8°. (Teachers college record. Vol. XV, no. 5)

198. **Wilker, Karl.** Kindes- und jugendpsychologie, jugendpflege und jugendfürsorge. Deutsche schule, 18: 679–83, 742–46, October–November 1914.

A review of recent writings. The second article deals with "Jugendfürsorge und jugendpflege" only. Together, the two articles constitute an informing survey of the "Jugendbewegung" and of the new emphasis upon pedagogy "vom kinde aus."

## SPECIAL METHODS OF INSTRUCTION.

199. **Painter, George S.** The psychology of visual instruction. American education, 18: 332–38, February 1915.

200. **Pineo, J. Franklin.** The educational value of the motion picture. Association seminar, 23: 129–46, January 1915.

To be continued.

201. **Willard, Frederic R.** The motion-picture theater and the child. Education, 35: 350–61, February 1915.

Gives the result of personal observation "gained through daily attendance at the motion-picture theater for a number of weeks, supplemented by the testimony of about 3,700 boys and girls in the schools of Springfield, Mass., Providence, R. I., and Lynn, Mass."

## SPECIAL SUBJECTS OF CURRICULUM.

202. **American psychological association.** Report of the Committee on the academic status of psychology. Printed by the Committee, December 1914. 27 p. 8°.

203. **[B., W. C.]** School essays in the Victorian age. Journal of education (London) 47: 61–63, January 1915. (Supplement)

Says that essay writing is an absolute waste of time unless it is preceded by real instruction.

204. **Baumann, Friedrich.** Psychologie des sprachunterrichts. Pädagogisches archiv, 56: 616–30, heft 11, 1914.

A rather caustic discussion of a book by a Danish scholar (Flagstad's "Psychologie der sprach pädagogik." Leipzig, B. G. Teubner, 1913).

205. **Bolenius, Emma Miller.** Literature for boys and girls. VI. The drama. Popular educator, 32: 320–23, February 1915.

After treating briefly the origin and technique of the drama, the author gives suggestions for bringing Shakespeare to the children and for composition exercises in the drama.

206. **Brennan, George A.** Nature-study at the Van Vlissingen school. Nature-study review, 11: 12–25, January 1915.

A part of this article first appeared in the Educational bi-monthly.

207. **Carmichael, R. D.** Mathematics and life—the vitalizing of secondary mathematics. School science and mathematics, 15: 105–15, February 1915.

Discussion by W. T. Stratton, p. 115–20.

An address delivered to the Kansas association of mathematics teachers at Topeka on November 14, 1914.

208. Classics versus modern languages. Journal of education (London) 47: 29–32, January 1915.

Contends that the knowledge of a foreign language is essential for a complete liberal education. Says that if only one language is taught, French has the prior claim. Latin should come second. For the third language Greek and German should be offered as alternatives, but Greek should not be compulsory.

209. **Comstock, Anna Botsford.** The growth and influence of the nature-study idea. Nature-study review, 11: 5–11, January 1915.

Extract from the address of the retiring president of the American nature-study society, delivered at Philadelphia, December 30, 1914.

210. **Coulter, John M.** The mission of science in education. School science and mathematics, 15: 93–100, February 1915.

Read before the annual conference of high school teachers, University of Illinois, November 20, 1914.

211. **Dann, George J.** The child's interest in geography. American education, 18: 340–45, February 1915.

The following question was put to a class of children, "What do you like best of all in geography, and why?" The answers received fairly "establish the fact that the interest in people, their habits, customs, and dress is strong and persistent in all of the grades of the elementary schools."

212. **Eggar, W. D.** Mathematics and science as part of a liberal education. School world (London) 17: 17–21, January 1915.

A plea for more mathematics in the curriculum; and some definite training in science in the later stages of a boy's career.

213. **Finley, John H.** The training of modern language teachers. American education, 18: 275–78, January 1915.

Address before the New York state teachers' association, Albany, N. Y., November 24, 1914.

The subject is discussed under two main divisions: (1) Reasonable requirements of training of modern language teachers, and (2) Suitable means for securing such training.

214. **Fitz-gerald, John D.** Languages and the college-preparatory course. Educational review, 49: 168–90, February 1915.

Advantages that would result if a seven-year, or even a six-year, high school curriculum were generally adopted. Gives curricula of Austrian and German schools, etc.

215. **Gammans, Harold W.** The pupil who fails in secondary school English; how to teach him. Education, 35: 378–84, February 1915.

216. **Gerrish, Carolyn M.** Secondary school composition. Educational review, 49: 126–35, February 1915.

Writer states that the principal obstacles to the proper accomplishment of the purposes of composition are: "(1) A more or less prevalent belief in the futility of trying to concentrate on content *per se;* (2) lack of time; (3) lack of equipment."

217. **Gruenwald, Benjamin C.** Thought in science and in science teaching. Popular science monthly, 86: 164–73, February 1915.

A plea for the humanizing of science teaching by giving up "the attempt to make scientists out of high-school students." Should make children appreciate the service and method of science.

218. **Hayden, Philip C.** The high school orchestra and its relation to the community. School music, 16: 16, 19–22, January-February 1915.

An address delivered before the teachers and parents association in Keokuk, Iowa.

This "address may give some hints to those who are interested in the organization and development of a high school orchestra."

219. **Hayward, Frank Herbert.** The lesson in appreciation; an essay on the pedagogics of beauty. New York, The Macmillan company, 1915. xv, 234 p. 12°.

This work deals with the "practical" problem of aesthetic education in a "practical" way, and also presents theory when theory will enlighten the practice.

220. **Hodge, Clinton F.** Nature study. Catholic educational review, 9: 145–52, February 1915.

These excerpts are taken from an address delivered before the Wisconsin teachers' association.

221. **Kirtland, John C.** High school Latin and the college-entrance requirements. Classical journal, 10: 227–32, February 1915.

Says there is imperative need of reform in the work of the first two years of the course. "It is now so hurried that it loses much of its immediate value and affords a poor preparation for further study."

222. **Leavitt, Frank M.** *and* **Huff, L. Grace.** Physiology and hygiene for prevocational boys. Elementary school journal, 15: 301–12, February 1915.

Advances reasons for preceding the course in hygiene by "an elementary and eminently practical study of anatomy and the functions of the various organs of the body."

223. **Lightley, Edmund.** The place of the textbook in mathematical teaching. School world (London) 17: 6–9, January 1915.

Advocates the use of the textbook, but it should be supplemented by oral and blackboard explanation. Deprecates a too rigid adherence to textbook methods.

224. **National education association.** Preliminary report of the biology subcommittee (on reorganization of secondary education) of the National education association. School science and mathematics, 15: 44–53, January 1915.

Separately reprinted.

225. **Nüchter, Fr.** Über sprachlehrpläne der amerikanischen volksschulen. Allgemeine deutsche lehrerzeitung, 66: 417–20, November 20, 1914.

An account and criticism of American teaching of the mother tongue as represented in the courses of study of New York city, New York state, Boston, Buffalo, Cleveland, Milwaukee, and Wisconsin.

226. **Slutz, Frank D.** A chat about the teaching of literature. Middle-west school review, 7: 5–7, February 1915.

227. **Pierce, Mary D.** The hidebound text-book as a handicap to teaching English in the grades. Virginia journal of education, 8: 307–10, February 1915.

Suggests some of the desirable qualities which an elementary text in English should possess.

228. **Stäckel, Paul Gustav.** Die mathematische ausbildung der architekten, chemiker und ingenieure an den deutschen technischen hochschulen. Leipzig und Berlin, B. G. Teubner, 1915. 198 p. 4°. (Abhandlungen über den mathematischen unterricht in Deutschland veranlasst durch die Internationale mathematische unterrichtskommission, hrsg. von F. Klein. bd. IV, hft. 9)

229. **Swift, H. T.** Illinois state spelling contest. School news and practical educator, 28: 277–79, February 1915.

Second annual state spelling contest held December 29, 1914. Gives a list of the words used.

230. **Sykes, Mabel.** The mathematics survey of the Chicago school system. School science and mathematics, 15: 120–26, February 1915.

Report of the Mathematics committee appointed to investigate the teaching of mathematics in elementary and secondary schools of Chicago. The Committee found the teaching of arithmetic in elementary schools good, but was not so well pleased with the work in the high schools.

231. **Taylor, E. H.** The teaching of mathematics in the continuation schools of Germany. School and society, 1: 208–13, February 6, 1915.

"This paper is based upon observations made in visiting continuation schools in Hamburg, Berlin, Halle, Munich, Karlsruhe, Heidelberg, Mannheim, and Frankfort-on-the-Main."

232. **Trost, W.** Die mathematischen fächer an den niederen gewerblichen lehranstalten in Deutschland. Leipzig und Berlin, B. G. Teubner, 1914. 150 p. illus. 8°. (Abhandlungen über den mathematischen unterricht in Deutschland veranlasst durch die Internationale mathematische unterrichtskommission, hrsg. von F. Klein. bd. IV, hft. 5)

233. **Wilcox, W. H.** What is the matter with high school composition? Atlantic educational journal, 10: 192–94, January 1915.

Discusses first some of the recent criticisms against high school English. Thinks that the difficulty is that the pupils need practice.

234. **Wilgus, James A.** The teaching of history in the elementary school. Educational review, 49: 136–46, February 1915.

Says that no attempt should be made "to fill the minds of the pupils with meaningless statements of facts and dates, either systematically arranged and tabulated, or disconnected and unassociated." Children should be impressed with the fact that history is "a present reality and not merely a matter of past times."

235. **Williams, Sherman.** Local history. School bulletin, 41: 111–13, February 1915.

Address delivered at the meeting of Associated academic principals, December 1914.

## KINDERGARTEN AND PRIMARY SCHOOL.

236. **Childe, Elizabeth.** Teaching concentration. Outlook, 109: 155–59, January 20, 1915.

Discusses the proper preparation for the kindergarten. Impressing the child with habits of self-control and interest.

237. **Grupe, Mary A.** The efficiency of the kindergarten as measured by the progress of the children through the grades. Northwest journal of education, 26: 278–81, February 1915.

238. **Itschner, Hermann.** Maria Montessori. Pädagogische blätter, 43: 464–73, 10. heft, 1914.

Analyzes the relation of Madame Montessori's work to the principles of Fröbel and the "dreams" (self-styled) of Ellen Key. Objects to the undervaluation of children's fancy in her system.

239. **Palmer, Luella A.** Montessori suggestions for kindergartners. Kindergarten review, 25: 349–53, February 1915.

## RURAL EDUCATION.

240. **Coffman, Lotus D.** Rural school supervision. Moderator-topics, 35: 447–48, 467–69, 487–88, February 11, 18, 25, 1915.

An address given before the Michigan state teachers' association.

241. **Cooper, Elizabeth.** The country school teacher. Educational foundations, 26: 347–51, February 1915.

242. **Crawshaw, F. D.** *and* **Yocum, W. K.** Manual arts problems of the rural school. Rural school teacher, 1: 13–14, February 1915.

First of a series of articles on introducing manual arts into the rural schools.

243. **Cubberley, Ellwood P.** *and* **Elliott, Edward C.** Rural-school administration. School and society, 1: 154–61, January 30, 1915.

Treats of the reorganization of rural schools, advocating the county-unit system of administration.

244. **Field, Jessie.** College women and country leadership. New York city, National board of the Young women's Christian associations of the United States of America [1915] 59 p. 8°.

Topics for study and discussion, and a suggested program for a meeting, follow each chapter.

245. **Kennedy, Joseph.** Rural life and the rural school. New York [etc.] American book company [1915]. 189 p. illus. 12°.

Writer says that if rural problems are to be solved, true conceptions of values must be established in the social mind, with reference to personality of the teacher, standards for teaching, supervision, school equipment, salary, etc. The present *laissez-faire* spirit, attitude, and methods of American rural life and rural education must be overcome.

246. **Lane, C. H.** *and* **Miller, E. A.** Correlating agriculture with the public-school subjects in the Southern states. Contribution from the Office of experiment stations. January 21, 1915. Washington, Government printing office, 1915. 41 p. 9 figs. 8°. (U. S. Department of agriculture. Bulletin no. 132.)

Prepared especially for the use of rural school teachers in the Southern states.

247. **Pennsylvania state educational association. Committee on rural schools.** Report on rural schools. Harrisburg, Pa., December 29, 1914. 103 p. 8°.

Chairman of Committee: Nathan C. Schaeffer.

248. **Rapeer, Louis W.** Standardization of the rural school plant. School and society, 1: 217–26, February 13, 1915.

Writer believes in the following essentials of rural education: (1) A permanent rural-life leader who can make a specialty of community education in a single district as a life work. (2) Schooling that is directly and immediately related to country life and its needs. (3) Methods of education in accord with the nature of the learning process in children and youth.

249. The rural world at play. Playground, 8: 379–93, February 1915.

250. **Sears, J. B.** The problem for the rural school. Popular science monthly, 86: 174–79, February 1915.

The problem is the problem of the rural people. Says that the rural school must accept its share in large social, economic, and intellectual responsibilities.

## SECONDARY EDUCATION.

251. **Bolenius, Emma Miller.** A "new idea" high school. Popular educator, 32: 326–29, February 1915.

Treats of the various activities of the Central commercial and manual training high school in Newark, N. J., showing how it is solving the problem of the balanced education.

252. **Butterworth, Julian E.** An evaluation of methods for providing free high school tuition. School review, 23: 85–96, February 1915.

Gives an analysis and comparison of existing free tuition laws and their results. Says that some form of cooperation between the state and the local unit is the preferable one.

253. **Cook, William A.** Equalization of privileges in county high schools. Colorado school journal, 30: 7–9, January 1915.

Tells of the branch high schools established in Colorado.

254. **Downing, Elliot R.** The scientific trend in secondary schools. Science, 41: 232–35, February 12, 1915.

Statistical graphs based on data contained in the report of the Commissioner of education, 1910; Ohio school report, 1913, etc.

255. **McCormick, B. E.** A plea for summer sessions in the high school. Wisconsin journal of education, 47: 7–9, January 1915

The author believes that there is a demand for summer sessions in the high school, as there are many in every high school who would attend in order to shorten the high school period. This would result in less "dropping out" and probably larger graduating classes.

256. **McKenny, Charles.** The purpose of the high school. American schoolmaster, 8: 10–16, January 1915.

Address delivered before the Michigan schoolmasters' club, at Ann Arbor, Mich., April 3, 1914.

257. **Pray, W. J.** A study of the first class high schools of Missouri. Missouri school journal, 32: 56–58, February 1915.

A study of the high schools of Missouri from 1905 to 1913, showing what has been the trend of the individual courses in the curriculum during this time. Agriculture alone, of all the generally recognized high school sciences, shows any gain in its percentage enrollment.

## TEACHERS: TRAINING AND PROFESSIONAL STATUS.

258. **Beale, R. L.** The selection of the teacher. Virginia journal of education, 8: 292–96, February 1915.

The author thinks that the board should establish a minimum standard for the entire teaching force, that it is dangerous to delay selection until the best teachers are no longer available, that teachers should be chosen with an eye to permanence and should not be chosen without a personal interview, and lastly, that it is worth while to consider in the selection of a teacher some plan by which she may be held.

259. **Harris, H. S.** The spirit of the teacher. Public schools, 1: 5–6, February 1915.

The writer thinks that the spirit of the teacher is the all-important factor in a successful school. Shows how the spirit of the teacher manifests itself in the intellectual attitude of the pupils, in the pupils' view of life, the attitude of the pupil in his daily work, etc.

260. **Marrs, S. M. N.** Teacher training in high schools. Texas school journal, 32: 20–21, February 1915.

This is the first article of a series dealing with teacher-training in our high schools. Mr. Marrs and several others will write the special articles and the last one will be a symposium on the subject. Every man will be free to say what he wants to say "and the reader can take his choice."—Editor.

261. **Slutz, Frank D.** The teacher as an artist for life's sake. Colorado school journal, 30: 4–7, January 1915.

An address before the Colorado teachers' association, December 31, 1914.

262. The Wisconsin survey of the state normal schools. American school, 1: 13–16, January 1915.

"Wisconsin has just completed a two year study of her normal school system, the most thorough and comprehensive which has ever been made." This article gives the findings and the recommendations.

## HIGHER EDUCATION.

263. **Benjamin, C. H.** Fraternity grades at Purdue university. Science, n. s., 41: 135–38, January 22, 1915.

Gives statistics of fraternity men in student activities. Writer says: "On the whole, the fraternity man is one who is content with average rank and is ambitious for athletic, social, or political, rather than scholastic honors."

264. **Dabney, Charles W.** The movement for the modern city university in Germany. School and society, 1: 150–54, January 30, 1915.

The establishment of the municipal university of Frankfurt-on-Main.

265. **Dewey, John.** The American association of university professors—introductory address. Science, 41: 147–51, January 29, 1915.

A plea for "a more intense consciousness of our common vocation, our common object and common destiny; and a more resolute desire to apply the methods of science, methods of inquiry, and publicity, to our work of teaching."

266. **Foster, William T.** Reed college. School review, 23: 97–104, February 1915.

Discusses the activities of Reed college, Portland, Oreg. Extension work, etc.

267. **Kirkpatrick, Edwin A.** Who should go to college. Is it possible to arrive at standards by which to determine the selection of those who for the sake of society should receive higher education? Religious education, 10: 32–39, February 1915.

In the writer's judgment standards will never be found to determine who should receive higher education. He thinks that teachers and psychologists in cooperation can work out standard tests that would be of help in enabling a youth to tell whether he is ready for advanced work.

268. **Lefevre, Arthur.** The organization and administration of a state's institutions of higher education. Austin, Texas, Von Boeckmann-Jones co., printers, 1914. 524 p. 8°.

By the sometime secretary for research of Organization for the enlargement by the state of Texas of its institutions of higher education.

269. **Merrill, Robert V.** Some present aspects of foreign university life. Classical journal, 10: 223–26, February 1915.

Conditions existing in English universities.

270. **Royce, Josiah.** The Carnegie foundation for the advancement of teaching and the case of Middlebury college. School and society, 1: 145–50, January 30, 1915.

Paper presented at the meeting for organization of the Association of American university professors, New York, January 2, 1915.

271. **Stevenson, John J.** Economic conditions of the college staff. Religious education, 10: 27–32, February 1915.

272. **Strong, Frank.** The opportunity of American universities. School and society, 1:109–14, January 23, 1915.

Discusses the opportunity of American universities to become the center of the intellectual life of the next generation on account of the European war.

273. **Sully, James.** Göttingen in the sixties. Hibbert journal, 13: 284–99, January 1915.

Character study of university life at Göttingen, Germany.

274. **Swaen, A.** Le rôle des universités et les universités belges. Revue internationale de l'enseignement, 34: 264–75, November–December 1914.

The author, who is rector of the university of Liége, discusses the requirement and proposals for a stronger development of pure science in Belgian universities. Pleads for reformation of the legal status of the two state universities, a privilege already granted to the universities of Louvain and Brussels.

275. Les universités françaises aux universités des pays neutres. Revue internationale de l'enseignement, 34: 245–47, November–December 1914.

Gives the point of view of French university men regarding the European contest. For a statement of the German side, see item 1680 in this record for December 1914.

276. **Woodbridge, Frederick J. E.** The university and the public. Educational review, 49: 109–25, February 1915.

Writer contends that "the problem of civilization, the problem of self-government, the problem of democracy, is ultimately the problem of the university and the public."

## SCHOOL ADMINISTRATION.

277. **Bagley, W. C.** Professor Judd's criticisms of the eight-year elementary curriculum. School and home education, 34: 212–16, February 1915.

Discusses the article by Professor Judd on the Junior high school which appeared in the School review for January 1915.

278. **Coffman, Lotus D.** Supervision: its nature and scope. School and home education, 34: 227–35, February 1915.

Read before the City superintendents' association of Illinois in Urbana, November 19, 1914.

279. **Evans, C. E.** Unsettled educational problems. Texas school journal, 32: 7–9, November 1914.

National functions in education.

280. **Harris, James H.** The six-and-six plan. Journal of education, 81: 89–91, 102–103, January 28, 1915.

An abstract of a paper read at the Iowa state teachers' association.

This abstract contains a summary of the arguments given for and against the six-and-six plan.

281. **Kinkead, R. G.** The Columbus idea of the six-and-six plan. Ohio teacher, 35: 248–49, January 1915.

282. State aid: a study by the state department. Texas school journal, 32: 7–9, February 1915.

A questionnaire relative to the problem of state aid was sent to the state superintendent of public instruction in each state and in the colonies. This is a summary of the answers received.

283. **Stewart, Rolland Maclaren.** Co-operative methods in the development of school support in the United States. Iowa City, Iowa [Chesnutt printing co.] 1914. 162 p. fold. tables. 8°. ([State University of Iowa] Monograph in education.)

A study of methods of supporting schools—in the colonies, by the federal government, by the states, a statistical study of support for 22 years, and some recent tendencies.

284. **Trusler, Harry R.** Illegal expenditures of school money. American school board journal, 50: 19–20, 78, February 1915.

285. **Wallace, B. Holmes.** The adaptation of the Gary plan at Swarthmore, Pa. American school board journal, 50: 32, February 1915.

In conclusion the writer says that "after two years' trial, all connected with it feel that the Swarthmore adaptation of the Gary idea is a success and that we have a more efficient, better balanced school than would have been possible under the old plan."

## SCHOOL MANAGEMENT.

286. **Anthony, Hettie M.** Credit for home work. Journal of home economics, 7: 66–70, February 1915.

Gives some plans worked out by different schools for giving credit for home work.

287. **Brown, J. Stanley.** Supervised study in high school. School and home education, 34: 207–12, February 1915.

Read at Illinois schoolmasters club, October 24, 1914.

288. **Harris, James H.** An inquiry into the departmental system. Elementary school journal, 15: 323–30, February 1915.

Describes the attitude of the pupils of the 7th and 8th grades of the schools of Dubuque, Iowa, "toward the departmental system which has been in operation in these grades for about three years."

The evidence and experience of the pupils confirm the advantages theoretically predicated by schoolmen for the departmental system.

289. **Richardson, W. H.** The importance of discipline in our school system. Ohio educational monthly, 64: 52–56, February 1915.

290. **Rogers, Roswell W.** The difficulties in transition from the elementary school to the high school. Mississippi educational advance, 4: 13–16, February 1915.

Considers some of the principal causes of the difficulties of transition and gives a few of the possible remedies.

291. **Runkle, Erwin W.** Time economy in courses of study. Pennsylvania school journal, 63: 303–306, January 1915.

The writer says that some of the means of economy are first, elimination of subjects or parts of subjects, simplifying the courses of study, second, by more efficient instruction, third, by better supervision, and fourth, by coordination of schools and courses so as to eliminate needless duplication. He gives also what seems to him to be some actual readjustments in the college to meet the demands of economy of time.

292. **Shreves, Rolland Merritt.** Supervised study: its purpose, plan and results. Wyoming school journal, 11: 142–46, January 1915.

293. **Ziertmann, Paul.** Über individuelle behandlung von schülern, einige fälle aus der erfahrung. Pädagogisches archiv, 56: 549–64, heft 10, 1914.

CONTENTS.—I. Sittliche und ärztliche beurteilung. II. Ein merkwürdiger fall von "einseitiger begabung" [A case of attempted vocational guidance.]

## SCHOOL ARCHITECTURE.

294. **Conwell, L. R. R.** School insurance. Teaching, 1: 13–15, January 15, 1915.

295. **Study, Harry P.** The school janitor. Teaching, 1: 8–11, January 15, 1915.

296. **Winslow, C.-E. A.** The ventilation and sanitation of school houses. School and society, 1: 190–96, February 6, 1915.

Address before the New Jersey sanitary association, Lakewood, N. J., December 11, 1914.

## SCHOOL HYGIENE AND SANITATION.

297. **Arnold, Felix.** Obstructed breathing and memory. Psychological clinic, 8: 234–46, January 15, 1915.

Gives the results of a series of tests, showing that in all cases of obstructed breathing from whatever source, there will be a loss in the results of memorizing verbal matter of from 10 to 30 per cent.

298. **Burgerstein, Leo.** School hygiene; tr. by Beatrice L. Stevenson and Anna L. von der Osten. New York, F. A. Stokes company [1915] xix, 188 p. illus. 12°.

299. **Foster, Wilfred L.** Improvement of dental hygiene in the high school, with relation to efficiency. Psychological clinic, 8: 230–33, January 15, 1915.

Tells of the improvement of dental hygiene in one of the high schools of New York city.

300. **Hedlund, C. Nath.** Sverges första friluftsskola öppnad i Stockholm. Svensk läraretidning, 33: 965–66, November 18, 1914.

An account of the steps which led to the opening of the first Swedish open air school in Stockholm.

301. **Reed,** ***Mrs.*** **F. A.** Speech impediments and their correction in the public schools of Detroit. Volta review, 17: 7–8, January 1915.

Investigations show that speech impediments almost invariably increase in severity as soon as the child enters school. During the year 1914, 483 children were examined. Work accomplished.

302. **Roach, Walter W.** Open air school work in American cities. School progress, 5: 9-13, January 1915.

A collection of short reports from a number of cities in the United States.

## PHYSICAL TRAINING.

303. **Bowen, Wilbur P.** The ethics of football. American schoolmaster, 8: 1-9, January 1915.

304. **Fisher, George J.** Present-day tendencies in physical education. Physical training, 12: 74-82, January 1915.

The author is of the opinion that in many centers the attempt to make the physical program informal has become extreme and the more orthodox and formal types of exercise have been neglected, often to the serious weakening of the day's order. He sent out questionnaires to a selected number of individuals to find out how they felt about it. The answers are given here.

305. **Guilbert, E. F.** Public school gymnasiums. American city, 12: 101-4, February 1915.

Discusses the design and construction of apparatus rooms, dressing rooms, lockers, showers, etc. Illustrated.

306. **Kaull, Lavinia Hendey.** Physical education complete for schools and playgrounds. [Sacramento, Cal., New publishing company, 1915] 272 p. incl. front., illus. 8°.

307. **Koch, E. B.** Swimming in the elementary schools. American physical education review, 20: 15-21, January 1915.

## SOCIAL ASPECTS OF EDUCATION.

308. **Chambers, W. G.** Co-operation in education. Pittsburgh school bulletin, 8: 2115-19, January 1915.

Address delivered at the Pennsylvania state educational association, December 31, 1914.

Discusses the cooperation of the school with the church, business, the press, the home, and with libraries, hospitals, social settlements, and other institutions.

309. **Mewius, Wally.** Aus der arbeit des Charlottenburger siedlungsheimes. Monatshefte der Comenius-gesellschaft für volkserziehung, 22 (n. f. 6): 132-36, December 1914.

310. **Roberts, Edward D.** The Cincinnati schools. American school board journal, 50: 11-13, 78-79, February 1915.

What co-operation has done for the schools of Cincinnati.

311. **Saupe, ——.** Bericht über den allgemeinen fürsorge-erziehungstag vom 15.-17. juni in Halle a. S. Zeitschrift für kinderforschung, 19: 714-22, September 1914.

An account of the proceedings of the joint sessions of the first Deutsche kinderschutztag and of the Allgemeine fürsorge-erziehungstag.

## RELIGIOUS EDUCATION.

312. **Eby, Frederick.** A new plan for religious education. Bulletin of the Board of education of the Methodist Episcopal church, South, 4: 198-201, February 1915.

A plan of cooperation between the church and public schools for giving Bible instruction to pupils of the public schools.

313. **Hogan, W. E.** Plans for religious education of pupils in state schools. Bulletin of the Board of education of the Methodist Episcopal church, South, 4: 202-9, February 1915.

Treats of the nature and success of the following plans of religious instruction in public schools: North Dakota plan, Colorado plan, Gary plan, New York city plan, and the Pennsylvania plan.

314. **Horn, P. W.** The educational value of the old time religion. Texas school journal, 32: 15-16, 43-45, February 1915.

The writer is skeptical as to the educational value of the substitutes that are being suggested for the personal type of religion.

315. **Kretzmann, Paul E.** Lutheran religious education. Provision for religious education in the evangelical Lutheran church of the United States. Religious education, 10: 5–15, February 1915.

The subject is discussed under the following headings: The parochial school, The Christenlehre, Sunday schools, Saturday and summer schools, and Higher education.

316. **Kuykendall, J. W.** Religious education by church and school. Arkansas teacher, 3: 1–3, February 1915.

After discussing the relative duty of the church and the school in the religious and moral education of the child, the writer explains the Colorado plan of credit for Bible study.

317. **Schmidt, Hugo.** Die geistigen grundlagen der religionsloesen sittlichkeit. Zeitschrift für philosophie und pädagogik, 21: 513–32, September 1914.

A criticism of Ferdinand Buisson's conception of an "école laïque." (See L'École et la nation. *In* L'Année pédagogique. Deuxième année—1912, p. 1–16.)

## MANUAL AND VOCATIONAL TRAINING.

318. **Bagley, W. C.** The unit versus the dual system of vocational education. Educational bi-monthly, 9: 191–99, February 1915.

An address before the Illinois state teachers' association, November 29, 1914.

The writer thinks that a separate system of vocational schools is not only unnecessary, but fraught with the greatest danger to our national ideals and institutions.

319. **Cushman, Lillian S.** A test of efficiency for the industrial arts. Industrial-arts magazine, 3: 49–51, February 1915.

320. **Gompers, Samuel.** Industrial education and the American federation of labor. Manual training and vocational education, 16: 329–39, February 1915.

Address delivered at the eighth annual convention of the National society for the promotion of industrial education, December 10, 1914, at Richmond, Va.

This address is "looked upon as a definite and official statement on the attitude of labor toward several of the most important issues now before the leaders in industrial education."

321. **Harlan, Charles L.** Manual arts in the grades. Vocationist, 3: 3–9, December 1914.

The present status of the subject as shown by an examination of one hundred courses of study.

322. **Usherwood, T. S.** Manual training as an introduction to experimental work. School world (London) 17: 9–12, January 1915.

Says that "the unscientific nation is doomed to extinction: its competition is negligible ... An integral part of the machinery of science in education is the manual training school. Through handiwork and in the workshop scientific curiosity is most naturally aroused."

323. **Williams, William E.** Hope for the ninety and three. Pearson's magazine, 33: 298–304, February 1915.

Describes the activities of the People's college, Fort Scott, Kansas.

## VOCATIONAL GUIDANCE.

324. **Davis, Anne S.** Report of the Bureau of vocational supervision from April 1 to October 1, 1914. Educational bi-monthly, 9: 200–207, February 1915.

Gives statistics showing the number of children dealt with through the Chicago Bureau, also information concerning the placement of children and "follow-up" work.

325. **Thompson, Frank V.** Vocational guidance in Boston. School review, 23: 105–12, February 1915.

Discusses among other matters the relation of vocational guidance to continuation schools; work of the Placement bureau of Boston; duties of the vocational counselor, etc.

## HOME ECONOMICS.

326. **Goodsell, Willystine.** Education in problems of family life. Journal of home economics, 7: 59–62, February 1915.

Urges a thorough and impartial course on the development of domestic institutions and laws. Courses recommended in sex problems, marriage, and family life in all their aspects.

327. **Kittredge, Mabel Hyde.** The housekeeping centers of New York. Journal of home economics, 7: 63–65, February 1915.

A short history of the model flat or housekeeping center of New York and the reason for its growth.

## PROFESSIONAL EDUCATION.

328. **Bradford, Edward H.** The higher education in surgery. New England medical gazette, 50: 58–64, February 1915.

Work of the American college of surgeons.

329. **Brown, Elmer Ellsworth.** "Hear ye the word of the Lord." Methodist review (New York) 97: 60–67, January–February 1915.

An address at Drew theological seminary, by the chancellor of New York university, dealing with preparation for the ministry.

330. **Craig, Joseph D.** Albany medical college. Albany medical annals, 36: 1–18, January 1915.

Historical sketch of the college. Comparison made with other medical schools.

331. **McIntire, Charles.** Rigidity of the curriculum an obstacle to the progress of medical education. Journal of sociologic medicine, 16: 4–9, February 1915.

Discussion, p. 9–17.

Read at the thirty-ninth annual meeting of the American academy of medicine, Atlantic City, N. J., June 19, 1914.

332. **Owre, Alfred.** Dental education. Dental cosmos, 57: 166–73, January 1915.

Urges a united effort to have the state universities take over all dental education.

333. **Shennan, L. Storrow.** The Dunfermline school dental clinic of the Carnegie Dunfermline trust. Dental cosmos, 57: 11–25, January 1915.

Gives specimens of the cards and notices which are used in connection with the school at Dunfermline, Scotland.

334. **Smith, Theobald.** Scholarship in medicine. Boston medical and surgical journal, 172: 122–24, January 28, 1915.

Address to the students of the Harvard medical school, December 2, 1914. Emphasizes the relation between biological and social sciences.

## CIVIC EDUCATION.

335. **Luserke, M.** Staatsbürgerliche erziehung in der schule. Monatshefte der Comenius-gesellschaft für volkserziehung, 23: 99–106, October 1914.

The author is Gustav Adolph Wyneken's successor as director of the Freie schulgemeinde in Wickersdorf, which is a "landschulheim."

336. **Shuster, W. Morgan.** Peace and disarmament. Century magazine, 89: 503–11, February 1915.

"Reflections of a neutral on war and education." How to humanize a nation through education. Says: "Concisely or otherwise, every existing system of education or training for the individual in relation to his state tends to exalt physical force."

## MILITARY TRAINING.

337. **Schurman, Jacob G.** "Every college should introduce military training." Everybody's magazine, 32: 179–83, February 1915.

Advocates military training not only from the viewpoint of patriotism, but because of its intellectual, moral, and physical advantages. Believes the Government should offer commissions in the regular army "to the best-trained men in the military departments of our colleges and universities."

## EDUCATION OF WOMEN.

338. **Sellmann, ———.** Jugendpflege und die höheren mädchenschulen. Frauenbildung, 13: 481–88, 10 heft, 1914.

An account of work with girls, as carried on by the "Pfadfinderinnenbund," the "Wandervogel," and the "Deutscher junghelferbund."

339. **Women's educational and industrial union, Boston, Mass. Department of research.** The public schools and women in office service. Prepared under the direction of May Allinson. Boston, Mass., Women's educational and industrial union [1914?] 187p. 8°.

An investigation dealing with conditions applying to the commercial education of girls. Mr. F. V. Thompson, assistant superintendent of schools of Boston has the following to say in the Preface: "There is a tone of moderation throughout the report and there is evident no spirit of unnecessary challenge or indictment of the methods and purposes of commercial courses. Commendation is freely given to successful effort on the part of the schools, and criticism with a full appreciation of hampering conditions is stated with the evident purpose of helpfulness and encouragement. The attitude of the report will be found dispassionate, and commercial teachers reading it will feel impelled to renew their efforts with cheerfulness rather than with discouragement."

## NEGRO EDUCATION.

340. **Scott, Emmett J.** "A negro out of the ordinary." Southern workman, 44: 98–104, February 1915.

Remarkable career and educational abilities of Dr. Isaac Fisher, who has "not a drop of Caucasian blood in his veins." Winner of many prize essays on scientific, social, and educational subjects.

341. **Williams, W. T. B.** The Yankee schoolma'am in negro education. Southern workman, 44: 73–80, February 1915.

Debt of the negro to the teachers who came to the South to assist in his moral and mental uplift.

## ORIENTALS.

342. **Bose, Sudhindra.** American impressions of a Hindu student. Forum, 53: 251–57, February 1915.

Activities of Hindu students at American educational institutions.

343. **Russier, Henri.** L'instruction des indigènes au Tonkin. Revue pédagogique, 65: 277–88, December 1914.

## DEFECTIVE AND DELINQUENT CHILDREN.

344. **Dean, Maria M.** The responsibility of the general practitioner to the question of mental deficiency. New England medical gazette, 50: 83–92, February 1915.

Moral aspects of the problem. History of research work in the United States; Binet-Simon tests, etc.

345. **Hickman, H. B.** Delinquent and criminal boys tested by the Binet scale. Training school bulletin, 11: 159–64, January 1915.

346. **Walsh, Elizabeth A.** Ungraded class work in New York city—methods and results. Journal of psycho-asthenics, 19: 59–66, December 1914.

Read at the meeting of the American association for the study of the feeble-minded, Columbus, Ohio, June 1914.

## LIBRARIES AND READING.

347. **Koch, Theodore W.** The Imperial public library, St. Petersburg. Second paper: The story of a hundred years. Library journal, 40: 93–108, February 1915. plates.

348. **Morgan, Geoffrey F.** A suggested list of books for school libraries. Ohio teacher, 35: 253–55, January 1915.

List of books by grades.

## BUREAU OF EDUCATION: RECENT PUBLICATIONS.

349. City training schools for teachers; by Frank A. Manny. Washington, 1915. 165 p. (Bulletin, 1914, no. 47)

350. Cooking in the vocational school as training for home making; by Iris Prouty O'Leary. Washington, 1915. 36 p. plates. (Bulletin, 1915, no. 1)

351. Curricula in mathematics. A comparison of courses in the countries represented in the International commission on the teaching of mathematics; by J. C. Brown, with the editorial cooperation of David Eugene Smith, William F. Osgood, J. W. A. Young. Washington, 1915. 91 p. (Bulletin, 1914, no. 45)

## NEW PERIODICALS.

The American school; a journal for those who organize, administer, and supervise American education. Vol. 1, no. 1, January 1915. Published monthly. American school publishing company, Milwaukee, Wis. Editors: C. G. Pearse, W. B. Owen, J. W. Searson.

The Educational monthly. Vol. 1, no. 1, March 1915. Published monthly. State normal school, Athens, Ga. Frederick A. Merrill, editor.

The Rural school teacher. Vol. 1, no. 1, February 1915. 10 numbers a year. Security building, Chicago, Ill.

## PERIODICALS REPRESENTED IN FEBRUARY AND MARCH NUMBERS OF THIS RECORD.

Albany medical annals, 170 Washington avenue, Albany, N. Y.
Allgemeine deutsche lehrerzeitung, Leipzig, Germany.
American city, 93 Nassau street, New York, N. Y.
American education, 50 State street, Albany, N. Y.
American journal of nursing, 2419–21 Greenmount avenue, Baltimore, Md.
American journal of psychology, Clark university, Worcester, Mass.
American open air school journal, Broad and Chestnut streets, Philadelphia, Pa.
American physical education review, 93 Westford avenue, Springfield, Mass.
American school, American school publishing company, Milwaukee, Wis.
American school board journal, 129 Michigan street, Milwaukee, Wis.
American schoolmaster, State normal college, Ypsilanti, Mich.
American teacher, 225 Fifth avenue, New York, N. Y.
Archiv für pädagogik, Leipzig, Germany.
Arkansas teacher, Conway, Ark.
Association seminar, Seminar publishing company, Springfield, Mass.
Atlantic educational journal, 19 West Saratoga street, Baltimore, Md.
Atlantic monthly, 4 Park street, Boston, Mass.
Boston medical and surgical journal, 101 Tremont street, Boston, Mass.
Bulletin of the Board of education of the Methodist Episcopal church, South, 810 Broadway, Nashville, Tenn.
Bulletin of the Society for the promotion of engineering education, Lancaster, Pa.
Catholic educational review, Washington, D. C.
Century magazine, 353 Fourth avenue, New York, N. Y.
Child-welfare magazine, 227 South Sixth street, Philadelphia, Pa.
Classical journal, University of Chicago press, Chicago, Ill.
Colorado school journal, 230 Railway Exchange building, Denver, Colo.
Columbia university quarterly, Columbia university press, New York, N. Y.
Cornhill magazine, London, England.
Dental cosmos, Chestnut and Twelfth streets, Philadelphia, Pa.
Deutsche schule, Leipzig, Germany.
Education, 120 Boylston street, Boston, Mass.
Educational administration and supervision, Warwick and York, Baltimore, Md.
Educational bi-monthly, Board of education, Chicago, Ill.
Educational exchange, Birmingham, Ala.
Educational foundations, 31–33 East Twenty-seventh street, New York, N. Y.

Educational review, Columbia university, New York, N. Y.
Educator-journal, 403 Newton Claypool building, Indianapolis, Ind.
Elementary school journal, University of Chicago press, Chicago, Ill.
English journal, University of Chicago press, Chicago, Ill.
Everybody's magazine, Spring and Macdougal streets, New York, N. Y.
Forum, 32 West Fifty-eighth street, New York, N. Y.
Frauenbildung, Leipzig, Germany.
Harvard alumni bulletin, 50 State street, Boston, Mass.
Hibbert journal, London, England, and 6 Beacon street, Boston, Mass.
High school quarterly, University of Georgia, Athens, Ga.
History teacher's magazine, McKinley publishing company, Philadelphia, Pa.
Home progress, Riverside press, Cambridge, Mass.
Industrial-arts magazine, 129 Michigan street, Milwaukee, Wis.
Journal of education, 6 Beacon street, Boston, Mass.
Journal of education, London, England.
Journal of educational psychology, Warwick and York, Baltimore, Md.
Journal of geography, Madison, Wis.
Journal of home economics, Roland Park Branch, Baltimore, Md.
Journal of psycho-asthenics, Faribault, Minn.
Journal of sociologic medicine, 52 North Fourth street, Easton, Pa.
Kindergarten review, Springfield, Mass.
Lehrproben und lehrgänge, Berlin, Germany.
Library journal, 241 West Thirty-seventh street, New York, N. Y.
Louisiana school work, Baton Rouge, La.
Manual training and vocational education, Manual arts press, Peoria, Ill.
Mathematics teacher, 41 North Queen street, Lancaster, Pa.
Methodist review, 150 Fifth avenue, New York, N. Y.
Middle-West school review, Tenth and Douglas streets, Omaha, Nebr.
Midland schools, Des Moines, Iowa.
Mind and body, Herold building, Milwaukee, Wis.
Mississippi educational advance, Jackson, Miss.
Missouri school journal, Jefferson City, Mo.
Moderator-topics, Lansing, Mich.
Monatshefte der Comeniusgesellschaft, Berlin, Germany.
Monitor de la educación común, Buenos Aires, Argentine Republic.
National municipal review, North American building, Philadelphia, Pa.
Nature-study review, Ithaca, N. Y.
New England medical gazette, 80 East Concord street, Boston, Mass.
New republic, 421 West Twenty-first street, New York, N. Y.
Normal school bulletin, Board of regents of normal schools, Madison, Wis.
Northwest journal of education, Seattle, Wash.
Ohio educational monthly, Columbus, Ohio.
Ohio teacher, Box 326, Athens, Ohio.
Outlook, 287 Fourth avenue, New York, N. Y.
Pädagogische blätter, Gotha, Germany.
Pädagogische zeitung, Berlin, Germany.
Pädagogisches archiv, Braunschweig, Germany.
Pearson's magazine, 425-435 East Twenty-fourth street, New York, N. Y.
Pennsylvania school journal, Lancaster, Pa.
Physical training, 124 East Twenty-eighth street, New York, N. Y.
Pittsburgh school bulletin, 1003 Bessemer building, Pittsburgh, Pa.
Playground, 1 Madison avenue, New York, N. Y.
Popular educator, 50 Bromfield street, Boston, Mass.
Popular science monthly, The Science press, Garrison, N. Y.

Primary education, 50 Bromfield street, Boston, Mass.
Princeton alumni weekly, Princeton, N. J.
Psychological clinic, Woodland avenue and Thirty-sixth street, Philadelphia, Pa.
Public schools, 328 Empire building, Denver, Colo.
Public speaking review, Swarthmore, Pa.
Religious education, 332 South Michigan avenue, Chicago, Ill.
Revista de instrucción pública, Guatemala, Guatemala.
Revue internationale de l'enseignement, Paris, France.
Revue pédagogique, Paris, France.
Rivista pedagogica, Rome, Italy.
Rural school teacher, Security building, Chicago, Ill.
School and home education, Bloomington, Ill.
School and society, The Science press, Garrison, N. Y.
School-arts magazine, 120 Boylston street, Boston, Mass.
School music, Keokuk, Iowa.
School news and practical educator, Taylorville, Ill.
School news of New Jersey, New Egypt, N. J.
School progress, School progress league, Philadelphia, Pa.
School review, University of Chicago press, Chicago, Ill.
School science and mathematics, Mount Morris, Ill.
School world, London, England.
Schulhaus, Berlin, Germany.
Science, The Science press, Garrison, N. Y.
Southern workman, Hampton, Va.
Svensk läraretidning, Stockholm, Sweden.
Teacher, 2125 Uber street, Philadelphia, Pa.
Teachers college record, Teachers college, Columbia university, New York, N. Y.
Teachers magazine, 31 East Twenty-seventh street, New York, N. Y.
Teaching, State normal school, Emporia, Kans.
Texas school journal, 1927 Main street, Dallas, Tex.
Training school bulletin, Vineland, N. J.
Training school quarterly, Greenville, N. C.
Unpopular review, 35 West Thirty-second street, New York, N. Y.
Virginia journal of education, Richmond, Va.
Vocationist, Oswego, N. Y.
Volta review, Volta bureau, Washington, D. C.
White Mountain educator, Lancaster, N. H.
Wisconsin journal of education, Madison, Wis.
Wyoming school journal, Laramie, Wyo.
Yale review, 135 Elm street, New Haven, Conn.
Zeitschrift für kinderforschung, Langensalza, Germany.
Zeitschrift für lateinlose höhere schulen, Leipzig, Germany.
Zeitschrift für philosophie und pädagogik, Langensalza, Germany.

UNITED STATES BUREAU OF EDUCATION

BULLETIN, 1915, NO. 10 - - - - - - - WHOLE NUMBER 635

# MONTHLY RECORD OF CURRENT EDUCATIONAL PUBLICATIONS

COMPILED BY THE LIBRARY DIVISION OF THE
BUREAU OF EDUCATION, UNDER THE DIRECTION OF JOHN D. WOLCOTT, CHIEF OF DIVISION

APRIL, 1915

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# LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
*Washington, March 19, 1915.*

SIR: The southern Appalachian Mountain region is rich in resources. Its population contains a larger per cent of native-born white persons than that of any other section of the United States. The great majority of these are of the sturdiest stocks—English, Irish, Scotch, German, and French Huguenot. The energy, native ability, and patriotism of these people are known to the world. Yet, because of historical and geographical reasons, the section as a whole is backward in development, and a large per cent of the people are illiterate. Here, as elsewhere, and probably to a greater degree than in any other section of this country, the development of natural resources and the turning of potential wealth into actual wealth must depend on the education and training of the people. To this end the people are eager to help themselves, and people of other sections are willing to help them. But neither self-help nor the efforts of others can have the best results without a better understanding of present conditions, needs, and tendencies and of the difficulties inherent in the situation. To set these forth to some extent, clearly and accurately, is the purpose of the accompanying manuscript, prepared as the result of a study undertaken for the Bureau of Education by Norman Frost, whose experience in connection with Berea College, Berea, Ky., equips him unusually well for this work. Mr. Frost did not attempt to make this study exhaustive. To do this would have required more time than was at his command and more funds than the bureau had available for this purpose. It is, however, the most extensive study of education in this section yet undertaken, and is as accurate as the material at hand would permit. Delay in publication makes some of the figures out of date by one or two years, but it is not now possible to bring them up to date. I recommend that the manuscript be published as a bulletin of the Bureau of Education.

Respectfully submitted.

P. P. CLAXTON,
*Commissioner.*

The SECRETARY OF THE INTERIOR.

# A STATISTICAL STUDY OF THE PUBLIC SCHOOLS OF THE SOUTHERN APPALACHIAN MOUNTAINS.[1]

## INTRODUCTION.

Information concerning educational conditions in the southern Appalachian region is scattered, fragmentary, and often partisan to the assumption either that conditions are ideal or that they are inconceivably bad. The purpose of this study is to draw together the available facts in the case. Necessarily, this study is largely statistical.

The territory covered has been selected with the advice of school men familiar with conditions in the respective States. Practically all of this mountain region is included in 216 counties, lying in the 8 States of Alabama, Georgia, Kentucky, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia. These are referred to in the following pages as the "Appalachian Counties." Many of them are only partially mountainous, but are included because they lie wholly within the Appalachian region. Of these 216 counties, 98 are referred to as the "mountain counties." These include the more rugged counties, where the topography and economic conditions are most unfavorable to progress in education.

The data used in the tables are taken from the Federal Census of 1910 and from the school reports of the respective States. In every instance the latest information available has been used. In the course of the study six counties were visited. These were selected counties which might be considered as representative of the different types.

The counties visited were Buchanan and Wise in Virginia; and Blount, Cumberland, Hancock, and Hawkins in Tennessee.

Special thanks are due the county superintendents of these counties and the school officials of the respecive States, for the valuable assistance they have given in obtaining desired information.

## GENERAL CHARACTERISTICS.

The southern Appalachian region contains about 100,000 square miles. It is almost as large as the New England States and New York State combined; it is larger than the State of Oregon. This region extends in a northeasterly direction from a point south of Birmingham, Ala., to Maryland and Pennsylvania; and from the

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[1] A preliminary edition of this bulletin, without tables and plates, was issued in April, 1915.

Blue Ridge in the east to a rather indefinite line on the west, running near the middle of Tennessee and Kentucky, and the western side of West Virginia.

The character of this region varies greatly. There are broad, fertile valleys and narrow gorges; rough, precipitous mountains, and high, rolling plateaus; rich blue-grass land, and barren hillsides. The Shenandoah Valley, or, as it is often called, the Valley of Virginia, is one of the most fertile valleys in the country. Its inhabitants will tell you that it is the "dimple of the universe; a modern Garden of Eden." Many of the counties lying largely in the valley include also parts of the Blue Ridge and of the Shenandoah Mountains.

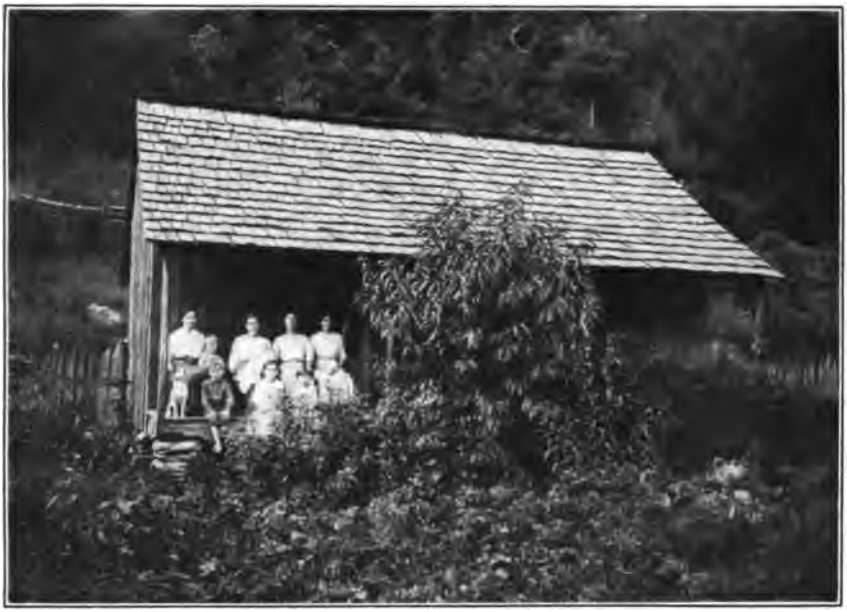
Wise County, Va., made famous by the stories of John Fox, jr., is in the main a rough, mountainous, mining county; yet a 40-acre farm about half a mile south of Coeburn sold for $10,700 in the spring of 1913. Coeburn is a village of less than 700 inhabitants. There are, too, some 30 or 40 square miles of blue-grass land in the southern part of the county.

Hancock County, Tenn., is considered a rough, mountainous county. It has no railroad, nor even a "pike." Yet some of the valley land in Hancock is held at $175 or $200 an acre.

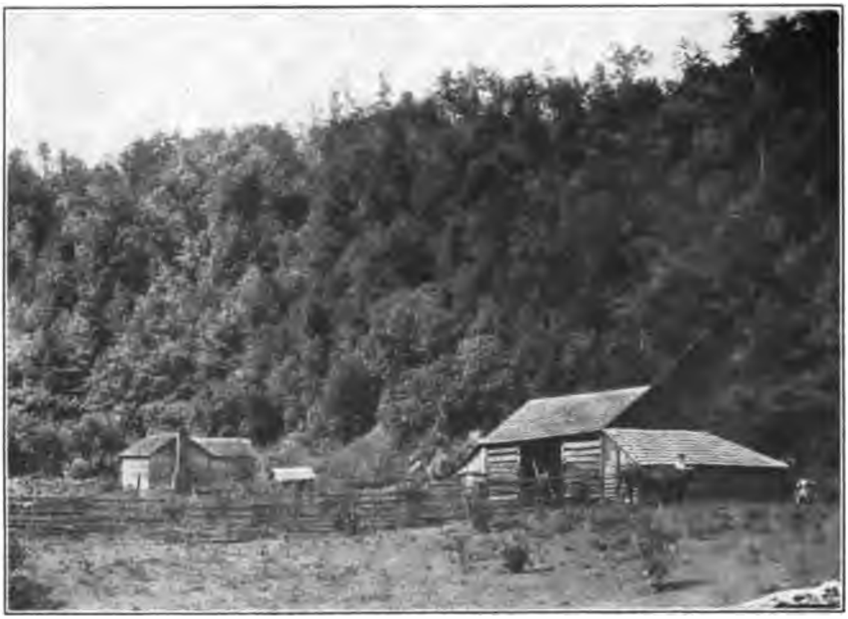
In the same way each of the counties might be considered. In each county there is diversity of conditions, and between different counties there is a still greater diversity. Any description of mountain conditions that takes into account only one kind of country must be partial and inadequate.

Mineral, timber, and water rights in the Appalachians are of great value. In most instances these rights are owned by outside interests. Large parts of the coal fields of West Virginia, Virginia, and Kentucky were bought for 50 cents an acre; $5 was a very high price to pay. Timber was sold for prices almost as low, and water rights were practically given away. The natural resources of the mountains, where they are developed, have brought employment to the mountain people, but their real value has gone, or is going, to the capitalist outside of this region.

The people of the mountains vary as much as the country itself. There are in the entire region more than 4,300,000 persons, about 600,000 of whom live in cities of 2,500 inhabitants or more. Among other cities are Asheville, N. C., Birmingham, Ala., Chattanooga and Knoxville, Tenn., and Roanoke, Va. It is true there are feudists and moonshiners in some localities, but the region is also the home of some of the best-known statesmen, lawyers, ministers, physicians, teachers, and merchants in the United States as well as of hosts of law-abiding citizens in different walks of life. It is as difficult to find a typical mountaineer as it is to find a typical New Yorker or New Englander.



TYPE OF FARM DWELLING IN THE MOUNTAINS.

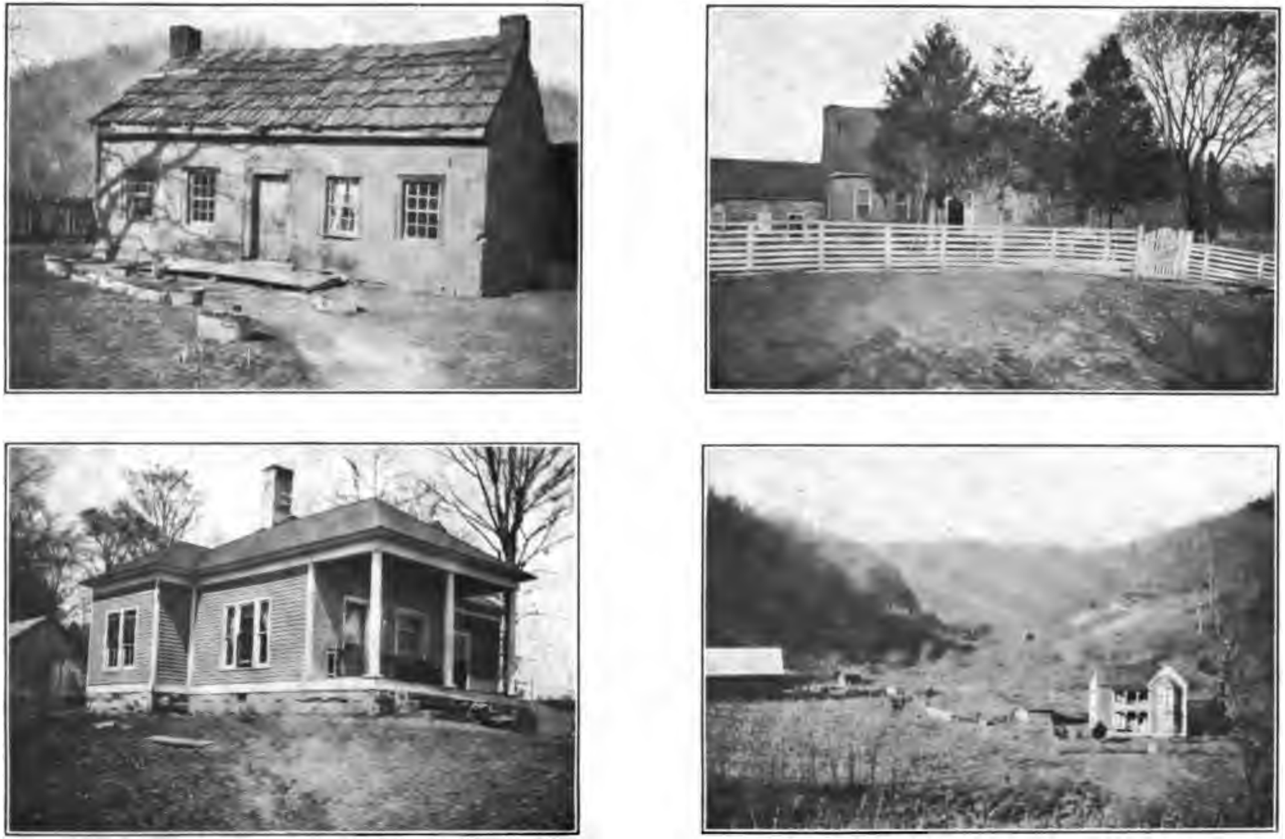


FARM AND BUILDINGS IN THE APPALACHIAN REGION.

MOUNTAIN MILL STILL IN USE.

There are many other mills in this region with thoroughly up-to-date machinery, however.

ANOTHER TYPE OF MILL IN THE MOUNTAINS.



TYPES OF RESIDENCES IN THE APPALACHIAN REGION.

TABLE 1.—*Percentages of native whites of native parentage in the Appalachian counties.*

| Per cent of total population. | Number of counties. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | In Alabama. | In Georgia. | In Kentucky. | In North Carolina. | In South Carolina. | In Tennessee. | In Virginia. | In West Virginia. | In the entire region. |
| 50-52 | 2 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 2 |
| 52-54 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 | 1 |
| 54-56 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| 56-58 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| 58-60 | 1 | ...... | ...... | ...... | ...... | ...... | 1 | ...... | 2 |
| 60-62 | 1 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 1 |
| 62-64 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| 64-66 | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | 1 |
| 66-68 | ...... | ...... | ...... | ...... | 2 | ...... | 1 | ...... | 3 |
| 68-70 | ...... | ...... | ...... | ...... | 1 | ...... | 1 | ...... | 2 |
| 70-72 | 2 | 1 | ...... | ...... | ...... | ...... | 1 | ...... | 4 |
| 72-74 | 1 | ...... | ...... | ...... | ...... | ...... | 3 | ...... | 4 |
| 74-76 | ...... | 1 | ...... | ...... | 1 | ...... | 1 | 1 | 4 |
| 76-78 | ...... | ...... | ...... | ...... | ...... | ...... | 1 | ...... | 1 |
| 78-80 | 1 | ...... | ...... | ...... | 1 | ...... | 3 | 1 | 6 |
| 80-82 | 2 | 1 | ...... | 1 | ...... | ...... | 3 | ...... | 7 |
| 82-84 | ...... | ...... | ...... | ...... | ...... | 1 | 1 | ...... | 2 |
| 84-86 | ...... | ...... | ...... | 3 | ...... | 1 | 3 | 4 | 11 |
| 86-88 | 2 | 2 | 1 | 3 | ...... | 3 | 1 | 1 | 13 |
| 88-90 | 4 | 1 | 1 | 1 | ...... | 5 | 2 | 4 | 18 |
| 90-92 | ...... | 4 | ...... | 6 | ...... | 4 | 3 | 1 | 18 |
| 92-94 | 2 | 3 | 1 | ...... | ...... | 10 | 5 | 2 | 23 |
| 94-96 | 1 | 2 | 6 | 3 | ...... | 7 | 4 | 2 | 25 |
| 96-98 | 2 | 2 | 3 | 7 | ...... | 9 | 3 | 2 | 28 |
| 98-100 | 1 | 4 | 19 | 1 | ...... | 5 | 3 | 6 | 39 |
| Total counties included. | 22 | 21 | 31 | [1] 25 | 5 | 46 | 40 | 25 | [2] 215 |

[1] Avery County has been formed since 1910 from parts of Caldwell, Mitchell, and Watauga Counties.

[2] Of the 215 counties, 204 have higher percentages of native whites of native parentage than their respective States. The percentages for the States are: Alabama, 55.1; Georgia, 53.3; Kentucky, 81.4; North Carolina, 67.3; South Carolina, 43.7; Tennessee, 75.7; Virginia, 64.3; West Virginia, 85.3.

In origin these people do not differ materially from the rest of the people in the States in which these mountains lie. The stock is, in the main, Scotch-Irish, with a few communities of Dutch and of Huguenots.

Most of the farmers own their land. In no county does the percentage of farms operated by owners drop below 28 per cent, and it runs as high as 92.8 per cent in one county in Virginia. In the different States the percentages in the mountain counties vary as follows:[1]

*Percentage of farmers in mountain counties who own their farms.*

| | Per cent. |
|---|---|
| Alabama | 30.8 to 76.3 |
| Georgia | 28.6 to 68.9 |
| Kentucky | 41.9 to 75.9 |
| North Carolina | 52.1 to 84.4 |
| South Carolina | 28.0 to 40.0 |
| Tennessee | 47.6 to 86.6 |
| Virginia | 58.9 to 92.8 |
| West Virginia | 42.4 to 90.0 |

Land values vary from practically nothing to about $200 per acre. In 63 of the 216 counties the average value is less than $10. In no case is the average more than $50.

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[1] 1910 census.

A large majority of the people are native whites, and of native parentage. In the 98 "mountain" counties 94.1 per cent are of this class. In the entire region this percentage is 83.6, while in the 8 States taken together it is only 65.3. Table 1 shows the variation among the 216 counties. It is interesting to note that there are 39 counties in which 98 per cent or more of the people are native whites of native parentage. A high percentage of native whites is usually a result of isolation.

### ILLITERACY.

Of the native white people 10 years of age or over in 1910, 15.9 per cent in the 98 "mountain counties" were illiterate; 12.6 per cent in the 216 "Appalachian counties" were illiterate; and 9.3 per cent in the eight States were illiterate.

In interpreting these figures it must be remembered that those for the entire States include the "Appalachian" counties, and those for the "Appalachian" counties include the "mountain" counties. The rate of white illiteracy for the eight States, excluding the Appalachian counties, is therefore much lower than 9.3 per cent. Data to determine how much lower were not available at the time this study was made.

Table 2 shows the distribution of the 216 Appalachian counties among the native white population 10 years of age or over in regard to their percentages of illiteracy.

**Table** 2.—*Percentages of illiteracy among native whites over 10 years of age in the Appalachian counties.*

| Per cent of native white illiterates 10 years of age and over. | Number of counties. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | In Alabama. | In Georgia. | In Kentucky. | In North Carolina. | In South Carolina. | In Tennessee. | In Virginia. | In West Virginia. | In the entire region. |
| 0-2 | | | | | | | 1 | | 1 |
| 2-4 | 1 | | | | | | 2 | 1 | 4 |
| 4-6 | | | | | | 1 | 4 | 9 | 14 |
| 6-8 | | 1 | | | | 1 | 6 | 4 | 12 |
| 8-10 | 2 | 3 | 1 | 2 | | 5 | 6 | 4 | 23 |
| 10-12 | 7 | 3 | 1 | 4 | 1 | 7 | 2 | 2 | 27 |
| 12-14 | 8 | 3 | 1 | 2 | | 9 | 6 | 1 | 30 |
| 14-16 | | 7 | 3 | 6 | 3 | 11 | 5 | 2 | 37 |
| 16-18 | 4 | 2 | 3 | 3 | 1 | 7 | 2 | 2 | 24 |
| 18-20 | | | 7 | 5 | | 3 | 4 | | 19 |
| 20-22 | | 2 | 5 | 2 | | 1 | | | 10 |
| 22-24 | | | 4 | 1 | | 1 | | | 6 |
| 24-26 | | | 2 | | | | | | 2 |
| 26-28 | | | 2 | | | | | | 2 |
| 28-30 | | | 1 | | | | 1 | | 2 |
| 30-32 | | | | | | | | | |
| 32-34 | | | | | | | | | |
| 34-36 | | | 1 | | | | 1 | | 2 |
| Total counties included. | 22 | 21 | 31 | 25 | 5 | 46 | 40 | 25 | [1] 215 |

[1] Of the 215 counties, 167 exceed the percentages of their respective States. The State percentages are: Alabama, 9.9; Georgia, 7.8; Kentucky, 10; North Carolina, 12.3; South Carolina, 10.3; Tennessee, 9.7; Virginia, 8; West Virginia, 6.4.

The illiteracy among native whites is used for comparison, because the figures for total illiteracy are so greatly complicated by the presence of large numbers of negroes throughout some parts of the eight

States and the relatively small number in the mountains. The people of the Appalachians are almost wholly native whites.

### SCHOOL ENROLLMENT AND ATTENDANCE.

There are more than 1,500,000 children between the ages of 6 and 20, inclusive, in the Appalachian region. Of these, 65.9 per cent are reported as enrolled in school. In the 98 mountain counties, 72.3 per cent are so reported; in the eight States all together only 63.6 per cent.

These figures indicate that a larger proportion of the children are enrolled in school in the Appalachian region than in the entire eight States in general, and that in the mountain counties the enrollment is greatest of all. While there are many chances for inaccuracies in the figures themselves, those who know the section best are agreed that there is a high enrollment; the average attendance, however, is low. There is undoubtedly some duplication in enrollment; that is, the same child may be enrolled in two or more schools during the year. School district lines are not very definite, and a boy or girl who does not like one teacher may try another school. One boy told with glee of having been "fired" from three schools in two weeks' time. There is seldom any checking up of the school enrollment to prevent such a boy from attending and being enrolled in more than one school. It happens also more or less frequently that teachers fail to report the enrollment in their schools. The county superintendent usually makes an estimate. Influenced as he is by a very laudable desire to make his county compare favorably with other counties, one may readily see that his estimate will not be too low. But this practice is probably little more common in these counties than elsewhere in these States, and in many other States.

Table 3 shows the number of counties reporting the various percentages of enrollment.

TABLE 3.—*Number of children (6 to 20 years of age) enrolled from every 100 in the Appalachian counties.*

| Enrolled from every 100 persons 6 to 20 years of age. | Number of counties. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | In Alabama.[1] | In Georgia. | In Kentucky. | In North Carolina. | In South Carolina. | In Tennessee. | In Virginia.[1] | In West Virginia. | In the entire region. |
| 40–45 | 1 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 1 |
| 45–50 | 1 | ........ | ........ | ........ | ........ | ........ | 3 | ........ | 4 |
| 50–55 | 2 | 1 | ........ | ........ | ........ | 1 | 1 | ........ | 5 |
| 55–60 | 3 | ........ | 2 | 2 | ........ | ........ | 3 | 1 | 11 |
| 60–65 | 6 | 2 | 3 | 3 | 2 | 2 | 13 | 2 | 33 |
| 65–70 | 3 | 3 | 2 | 4 | 3 | 5 | 12 | 5 | 37 |
| 70–75 | 3 | 7 | 2 | 5 | ........ | 12 | 5 | 6 | 40 |
| 75–80 | 2 | 4 | 10 | 3 | ........ | 10 | 1 | 9 | 39 |
| 80–85 | ........ | 2 | 7 | 1 | ........ | 9 | 1 | 2 | 22 |
| 85–90 | ........ | 1 | 1 | 3 | ........ | 4 | 1 | ........ | 10 |
| 90–95 | ........ | 1 | 1 | 1 | ........ | 3 | ........ | ........ | 6 |
| 95–100 | 1 | ........ | ........ | 1 | ........ | ........ | ........ | ........ | 2 |
| Total counties included. | 22 | 21 | [2] 28 | [2] 23 | 5 | 46 | 40 | 25 | 210 |

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[1] In Alabama and Virginia the school age begins at 7 years. In this table it has been reckoned from 6 years.

[2] In Kentucky 3 counties are not reported; and in North Carolina 4 counties, Avery, Caldwell, Mitchell, and Wautauga, have been grouped and treated as 1 county.

The statement is frequently made that large numbers of children in the mountains are entirely out of reach of any school. Unfortunately, no figures are available in regard to this point. An estimate seems the best that can be done here. In the six counties personally investigated the county superintendents estimated that a total of 115 children were not, and had not been, within reach of any school; that is, according to their estimate, 115 children in six counties had no opportunity to attend any school. This represents the number of such children known to school authorities and is probably a very conservative estimate. If these six counties may be considered as representative, there would be in the 216 counties 4,167 children out of reach of school. This is only a little over twenty-seven one-hundredths of 1 per cent of the 1,510,286 children in the entire region. The estimate might be doubled, or even trebled, and still be less than 1 per cent.

That this is a serious condition no one would deny. It is not so bad, however, as is sometimes supposed. In most instances in the six counties visited plans were well in hand to meet the situation. In only one county was this not so. In that county the superintendent was definitely committed to the policy of first building schools in communities where the people wanted new buildings and where they were willing to help construct them. The children who have no schools are usually in communities where the people do not care.

In average attendance the mountain region does not report quite as well as the 8 States in general, and the 98 mountain counties report slightly less than the entire region. In the 8 States, 63.6 pupils, on the average, from every 100 enrolled, attend daily; in the 216 [1] counties of the Appalachian region, 63.1 pupils; and in the 98 [2] mountain counties, only 61.2 pupils.

TABLE 4.—*Numbers of children attending daily from every 100 enrolled in the Appalachian counties.*

| Attending daily from every 100 enrolled. | Number of counties. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | In Alabama. | In Georgia. | In Kentucky. | In North Carolina. | In South Carolina. | In Tennessee. | In Virginia. | In West Virginia. | In the entire region. |
| 30–35 | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | 1 |
| 35–40 | ...... | ...... | ...... | 1 | ...... | ...... | ...... | ...... | 1 |
| 40–45 | 1 | ...... | 2 | ...... | ...... | 1 | 1 | ...... | 5 |
| 45–50 | 2 | 1 | 5 | ...... | ...... | ...... | ...... | ...... | 8 |
| 50–55 | 3 | 3 | 7 | 2 | 1 | 2 | 1 | ...... | 19 |
| 55–60 | 5 | 10 | 4 | 6 | 2 | ...... | 8 | 1 | 36 |
| 60–65 | 8 | 6 | 3 | 3 | 1 | 10 | 15 | 7 | 53 |
| 65–70 | 2 | 1 | 3 | 7 | ...... | 15 | 10 | 13 | 51 |
| 70–75 | 1 | ...... | ...... | 1 | 1 | 10 | 4 | 2 | 19 |
| 75–80 | ...... | ...... | ...... | 3 | ...... | 3 | ...... | 1 | 7 |
| 80–85 | ...... | ...... | ...... | 2 | ...... | ...... | 1 | 1 | 4 |
| 85–90 | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | 1 |
| 90–95 | ...... | ...... | ...... | ...... | ...... | 3 | ...... | ...... | 3 |
| 95–100 | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | 1 |
| Total counties included. | 22 | 21 | [3] 24 | 26 | 5 | 46 | 40 | 25 | 209 |

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[1] Information from 6 of these counties in Kentucky is not available.

[2] Information from 5 of the 98 counties is not available.

[3] In Kentucky information is not available from 7 counties.

Fortunately, in this case, we have also the figures for white attendance only. In the 8 States, the average daily attendance is 64 per cent of the total enrollment; in the 216 counties, 63.8 per cent; in the 98 counties, 61.3 per cent. These figures show the same tendency as those for the total attendance of white and colored.

The percentages of attendance of the Appalachian counties are shown in Table 4.

The low percentage of attendance is explained, in part at least, by Table 5, showing the irregularity of attendance in certain schools. The usual decrease in average attendance during the latter months should be noted.

TABLE 5.—*Monthly average attendance in certain 1-room schools in the southern Appalachians.*[1]

| States and counties. | Months. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | First. | Second. | Third. | Fourth. | Fifth. | Sixth. | Seventh. | Eighth. | Ninth. |
| **Alabama:** | | | | | | | | | |
| Talladega | 15 | 24 | 40 | 28 | 29 | 20 | 30 | ...... | ...... |
| | 28 | 32 | 35 | 27 | 19 | 15 | 14 | ...... | ...... |
| **North Carolina:** | | | | | | | | | |
| Jackson | 42 | 36 | 24 | 19 | ...... | ...... | ...... | ...... | ...... |
| | 37 | 34 | 28 | 28 | ...... | ...... | ...... | ...... | ...... |
| Rutherford | 14 | 26 | 25 | 20 | ...... | ...... | ...... | ...... | ...... |
| | 25 | 27 | 30 | 23 | 21 | ...... | ...... | ...... | ...... |
| Wilkes | 19 | 21 | 22 | ...... | ...... | ...... | ...... | ...... | ...... |
| | 21 | 20 | 21 | ...... | ...... | ...... | ...... | ...... | ...... |
| Graham | 16 | 11 | 12 | 12 | ...... | ...... | ...... | ...... | ...... |
| | 34 | 31 | 24 | 21 | ...... | ...... | ...... | ...... | ...... |
| **Tennessee:** | | | | | | | | | |
| Unicoi | 20 | 18 | 17 | 15 | 12 | 13 | ...... | ...... | ...... |
| | 23 | 24 | 23 | 20 | 19 | 18 | ...... | ...... | ...... |
| **Virginia:** | | | | | | | | | |
| Rockbridge | 14 | 16 | 17 | 15 | 15 | ...... | ...... | ...... | ...... |
| | 6 | 6 | 12 | 12 | 15 | ...... | ...... | ...... | ...... |
| Surry | 26 | 24 | 19 | 14 | 15 | 14 | 15 | 15 | 15 |
| | 17 | 15 | 15 | 18 | 18 | 15 | 15 | 15 | 14 |
| Warren | 21 | 19 | 19 | 17 | 20 | 21 | 19 | ...... | ...... |
| | 24 | 22 | 19 | 21 | 23 | 20 | 24 | ...... | ...... |
| Botetourt | 11 | 19 | 30 | 23 | 18 | 11 | ...... | ...... | ...... |
| | 15 | 19 | 26 | 25 | 23 | 19 | 17 | ...... | ...... |
| Buchanan | 35 | 36 | 32 | 26 | 25 | 26 | ...... | ...... | ...... |
| | 27 | 26 | 18 | 20 | 23 | ...... | ...... | ...... | ...... |
| **West Virginia:** | | | | | | | | | |
| McDowell | 32 | 36 | 36 | 33 | 32 | 30 | 28 | 27 | ...... |
| | 46 | 47 | 50 | 50 | 49 | 46 | 46 | 30 | ...... |
| Mercer | 8 | 8 | 6 | 8 | 8 | 6 | ...... | ...... | ...... |
| | 16 | 17 | 14 | 14 | 14 | 11 | ...... | ...... | ...... |
| Mineral | 19 | 18 | 15 | 14 | 11 | 13 | ...... | ...... | ...... |
| | 31 | 31 | 28 | 18 | 21 | 22 | ...... | ...... | ...... |

[1] Taken from special reports of county superintendents relative to the monthly attendance in 1-teacher schools for the year 1912–13. Data from individual schools were submitted. The figures used here are those given for the first two 1-room schools that were listed by the county superintendents. Each county is reported from which information was available.

## LENGTH OF SCHOOL TERM.

The average length of school terms in these 216 counties varies from 65 to 180 days. Table 7 shows this variation. For the rural schools of the United States the average term was 137[1] days in 1910. For the 8 States in which the Appalachians lie the average length of school term is 123[2] days; for the Appalachian counties it is 112[2] days, and for the 98 mountain counties 104[2] days. The mountain schools are seriously deficient in this respect.

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[1] Bulletin, 1913, No. 8, U. S. Bureau of Education.

[2] These figures are averages of county and State averages, respectively.

TABLE 6.—*Different lengths of school term in four mountain counties.*[1]

| Length of school term, in days. | Number of schools. | | | |
|---|---|---|---|---|
| | In Hancock County, Tenn., 1913. | In Hawkins County, Tenn., 1913. | In Wise County, Va., 1912. | In Jackson County, N. C., 1912. |
| Less than 80 | 2 | 1 | 5 | 2 |
| 80–85 | 1 | ........ | 5 | 29 |
| 85–90 | ........ | ........ | 2 | ........ |
| 90–95 | 5 | ........ | 4 | ........ |
| 95–100 | 2 | 2 | 6 | ........ |
| 100–105 | 37 | 8 | 9 | ........ |
| 105–110 | ........ | 13 | 1 | 1 |
| 110–115 | ........ | 4 | 7 | ........ |
| 115–120 | ........ | 13 | 6 | ........ |
| 120–125 | ........ | 46 | 16 | 2 |
| 125–130 | ........ | 16 | 1 | ........ |
| 130–135 | ........ | ........ | ........ | ........ |
| 135–140 | ........ | ........ | 1 | 1 |
| 140–145 | ........ | ........ | 10 | 6 |
| 145–150 | ........ | ........ | 1 | 1 |
| 150–155 | ........ | ........ | 1 | ........ |
| 155–160 | ........ | ........ | ........ | ........ |
| 160–165 | ........ | ........ | 6 | 6 |
| 165–170 | ........ | ........ | 3 | ........ |
| 170–175 | ........ | ........ | ........ | ........ |
| 175–180 | ........ | ........ | ........ | ........ |
| 180 or more | ........ | ........ | 5 | 1 |

[1] Blount and Cumberland Counties, Tenn., report a term of 110 days for all schools.

TABLE 7.—*Average lengths of school term in the Appalachian counties.*

| Average length of school term, in days. | Number of counties. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | In Alabama. | In Georgia. | In Kentucky.[1] | In North Carolina. | In South Carolina. | In Tennessee. | In Virginia. | In West Virginia. | In the entire region. |
| 65–70 | ........ | ........ | ........ | ........ | ........ | 1 | ........ | ........ | 1 |
| 70–75 | ........ | ........ | ........ | 1 | ........ | ........ | ........ | ........ | 1 |
| 75–80 | ........ | ........ | ........ | 1 | ........ | ........ | ........ | ........ | 1 |
| 80–85 | 1 | 1 | ........ | 9 | ........ | 5 | ........ | ........ | 16 |
| 85–90 | 1 | 1 | ........ | 2 | 4 | 3 | ........ | ........ | 11 |
| 90–95 | 1 | 1 | ........ | 2 | ........ | 5 | ........ | ........ | 9 |
| 95–100 | 2 | 3 | ........ | ........ | 1 | 6 | 2 | ........ | 14 |
| 100–105 | 2 | 6 | 1 | 4 | ........ | 8 | 4 | ........ | 25 |
| 105–110 | 5 | 5 | 1 | 2 | ........ | 2 | 3 | 1 | 19 |
| 110–115 | 4 | 1 | 6 | 1 | ........ | 3 | 5 | 3 | 23 |
| 115–120 | ........ | 1 | 7 | 1 | ........ | 2 | 3 | 1 | 15 |
| 120–125 | 2 | ........ | 5 | 2 | ........ | 1 | 3 | 7 | 20 |
| 125–130 | 2 | ........ | 3 | ........ | ........ | 2 | 6 | 3 | 16 |
| 130–135 | ........ | 1 | 3 | ........ | ........ | 3 | 6 | 4 | 17 |
| 135–140 | 1 | ........ | 1 | ........ | ........ | 1 | 2 | 2 | 7 |
| 140–145 | ........ | 1 | 2 | 1 | ........ | 1 | 3 | 1 | 9 |
| 145–150 | 1 | ........ | ........ | ........ | ........ | ........ | 2 | ........ | 3 |
| 150–155 | ........ | ........ | ........ | ........ | ........ | ........ | 1 | ........ | 1 |
| 155–160 | ........ | ........ | ........ | ........ | ........ | 2 | ........ | ........ | 2 |
| 160–165 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 1 | 1 |
| 165–170 | ........ | ........ | ........ | ........ | ........ | 1 | ........ | ........ | 1 |
| 170–175 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 1 | 1 |
| 175–180 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| 180 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 1 | 1 |
| Total counties included. | 22 | 21 | 29 | 26 | 5 | 46 | 40 | 25 | 214 |

[1] Information not available from 2 counties in Kentucky.

Not only does the length of the school term vary in different counties, but frequently it varies widely in the same county. Table 6 shows this variation for four counties. As this table indicates, a mere statement of average length of session has very little real significance, since it fails to show either the best or the worst conditions.

The length of school term is increasing all through the Appalachian region. State laws and increased taxation are both factors in bringing about this increase. In Hancock County the average term has been increased from three to five months in the last eight years. In every county investigated such an increase is taking place. This increase must be very great to make the school term of this region equal even to the average of rural schools throughout the United States.

## AVERAGE NUMBER OF DAYS EACH CHILD ATTENDS.

Table 8 shows the variation in the number of days' schooling the average child receives in different counties.

TABLE 8.—*Numbers of days the average child 6–20 attends in the Appalachian counties.*

| Days the average child attends school. | Number of counties. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | In Alabama. | In Georgia. | In Kentucky. | In North Carolina. | In South Carolina. | In Tennessee. | In Virginia. | In West Virginia. | In the entire region. |
| 20–25 | 1 | ........ | ........ | 2 | ........ | 1 | ........ | ........ | 4 |
| 25–30 | 1 | ........ | ........ | 1 | ........ | 1 | ........ | ........ | 3 |
| 30–35 | 3 | 4 | 1 | 3 | 3 | ........ | 4 | ........ | 18 |
| 35–40 | 5 | 3 | 2 | 3 | 1 | 4 | 4 | ........ | 22 |
| 40–45 | 6 | 3 | 4 | 4 | 1 | 4 | 3 | ........ | 25 |
| 45–50 | 1 | 7 | 5 | 4 | ........ | 5 | 7 | 1 | 30 |
| 50–55 | 4 | 3 | 6 | ........ | ........ | 10 | 10 | 6 | 39 |
| 55–60 | ........ | ........ | 2 | 4 | ........ | 4 | 7 | 5 | 22 |
| 60–65 | 1 | 1 | 2 | ........ | ........ | 3 | 2 | 3 | 12 |
| 65–70 | ........ | ........ | 1 | ........ | ........ | 6 | 1 | 6 | 14 |
| 70–75 | ........ | ........ | ........ | 1 | ........ | 5 | 2 | 2 | 10 |
| 75–80 | ........ | ........ | ........ | ........ | ........ | 1 | ........ | 2 | 3 |
| 80–85 | ........ | ........ | ........ | 1 | ........ | ........ | ........ | ........ | 1 |
| 85–90 | ........ | ........ | ........ | ........ | ........ | 2 | ........ | ........ | 2 |
| Total counties included. | 22 | 21 | [1] 23 | [1] 23 | 5 | 46 | 40 | 25 | 205 |

[1] Information is not available from 8 counties in Kentucky; and Avery, Caldwell, Mitchell, and Watauga Counties, in North Carolina, have been grouped together and treated as 1 county.

The three items of enrollment, attendance, and length of term are all brought together in showing the average number of days that each child attends school during a single year. In the entire eight States this average is 49.9 days; in the 216 counties of the Appalachian region it is 48.3; and in the 98 mountain counties it is 46. The figures show a slight lack of schooling for the children of the Appalachian region as compared with children throughout the States in which this region lies. When the comparison is made for white children only, the lack of schooling in the mountains becomes larger in proportion to the number for white children outside.

Stated differently, the average 20-year-old person in the mountain region has attended school only long enough to complete the fourth grade of a city school. Making allowance for poor teachers, poor equipment, and the irregularity of attendance, the average mountaineer actually has not had schooling equivalent to that of a child who has completed the fourth grade in a city school. This is true of the present generation of young people in this region; the older people have received even less.

## TEACHERS.

There are almost 25,000 teachers in the southern Appalachian region. It is impossible to make any definite statement concerning their training that will apply to all of the States. Methods of examination and certification vary so much that the percentage of first-grade certificates does not represent the same thing. In none of these eight States does a second-grade county certificate require more than the completion of the elementary school course.

In Georgia, Kentucky, North Carolina, South Carolina, and West Virginia, certificates are issued on State-wide examinations, in which the same questions are used for first, second, and third grade[1] certificates, while higher marks are required for the higher certificates. In Alabama certificates are issued on State-wide examination, with different questions for the applicants for different grades of certificates. Of the 3,416 teachers in the Appalachian section of the State, 1,066, or 31 per cent, hold third-grade certificates. The percentage in individual counties varies from 0 to 54.

Figures for the Appalachian counties in several States are indicated below. The percentages for those holding third-grade certificates only are given. In most instances this represents no further education than that which may be received in the schools in which the individuals concerned are teaching.

*Teachers holding third-grade certificates.*

| | Alabama. | Georgia. | Kentucky. | South Carolina. | West Virginia. |
|---|---|---|---|---|---|
| Per cent of teachers holding third-grade certificate... | 31 | 28 | 10 | 6 | 16 |
| Variation in percentage among counties.............. | 0-54 | 0-61 | 0-42 | 1-11 | 6-27 |

While these percentages represent, in general, undesirable teachers, it must be borne in mind that the figures are not comparable between States. It is not at all certain that more of the teachers are undesirable in West Virginia than in South Carolina.

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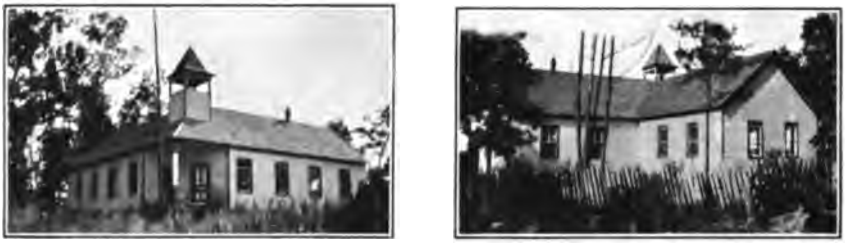
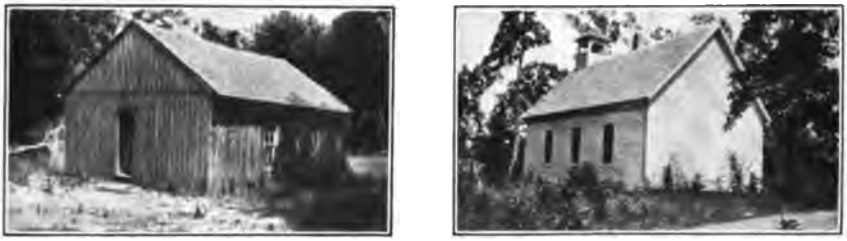
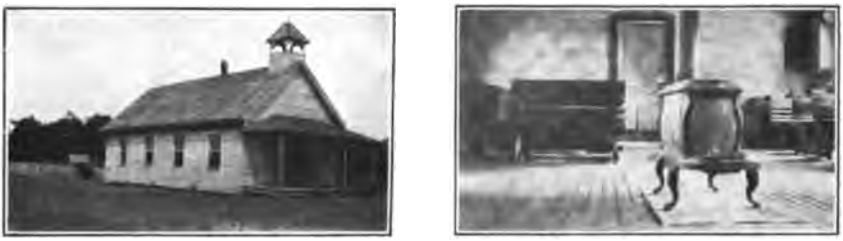
[1] The third-grade is the lowest grade of certificate given.



A new two-room school valued at about $1,000. Front and rear views.

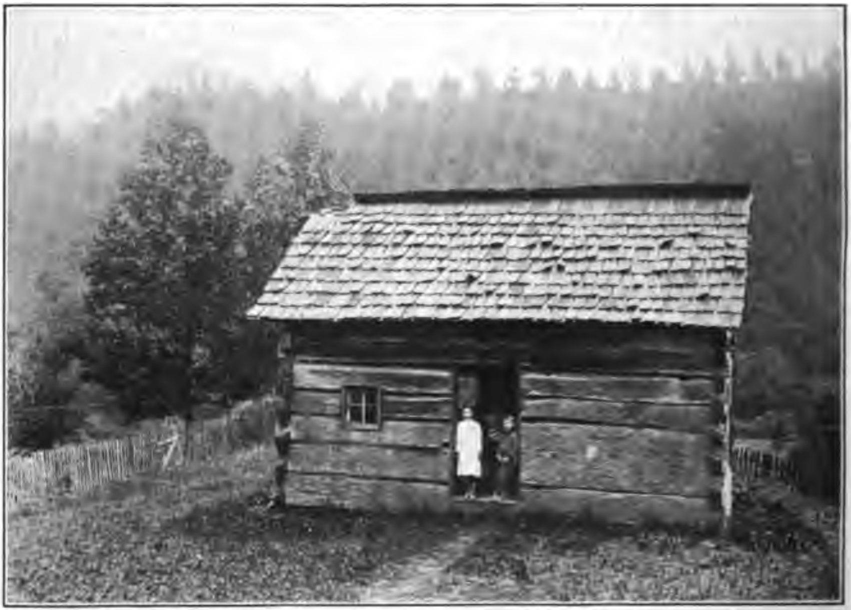


School building on the left is valued at about $100; building on the right at about $500.

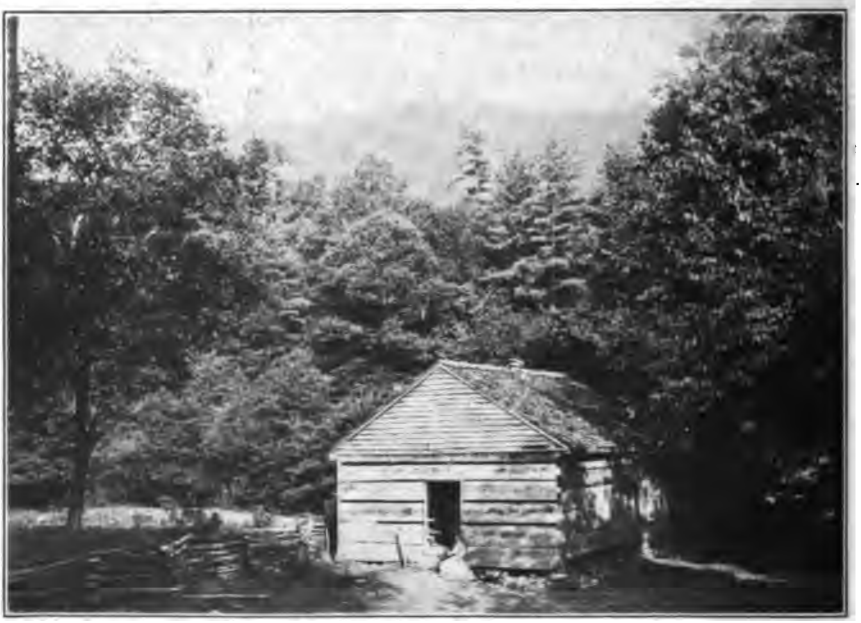


Exterior and interior of one-room schoolhouse valued at about $450.

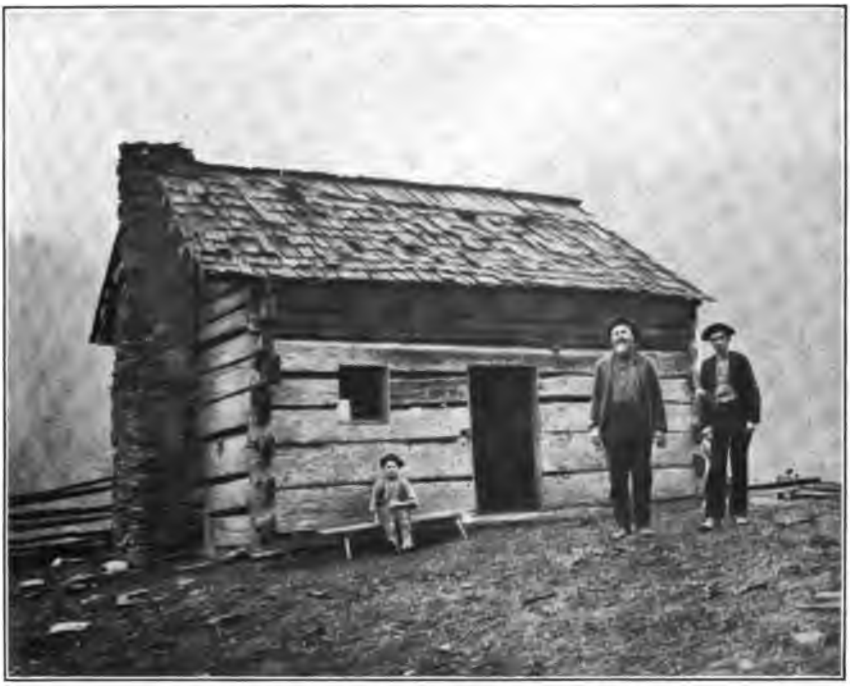
TYPES OF SCHOOL BUILDINGS.



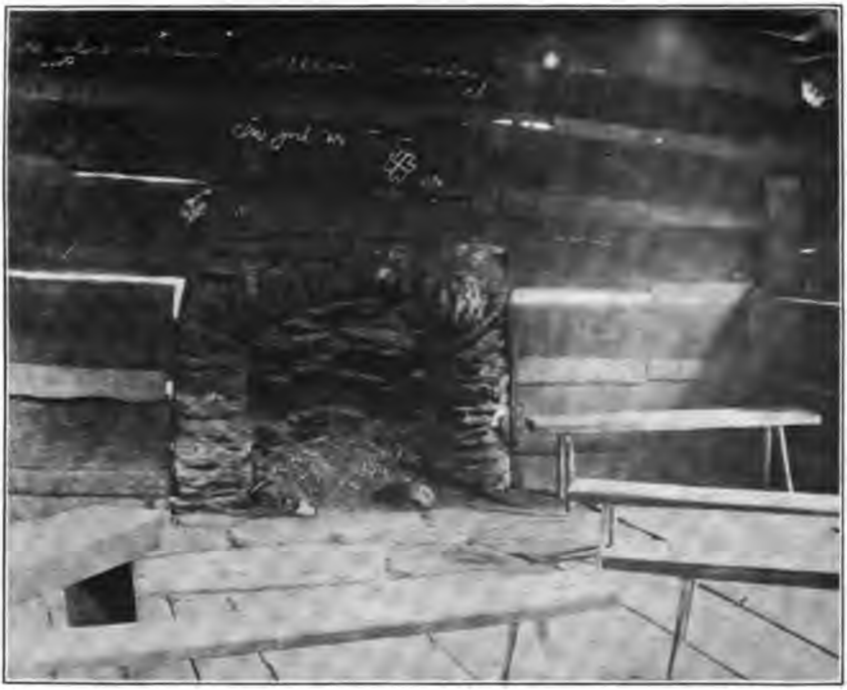
A LOG SCHOOLHOUSE VALUED AT $75.



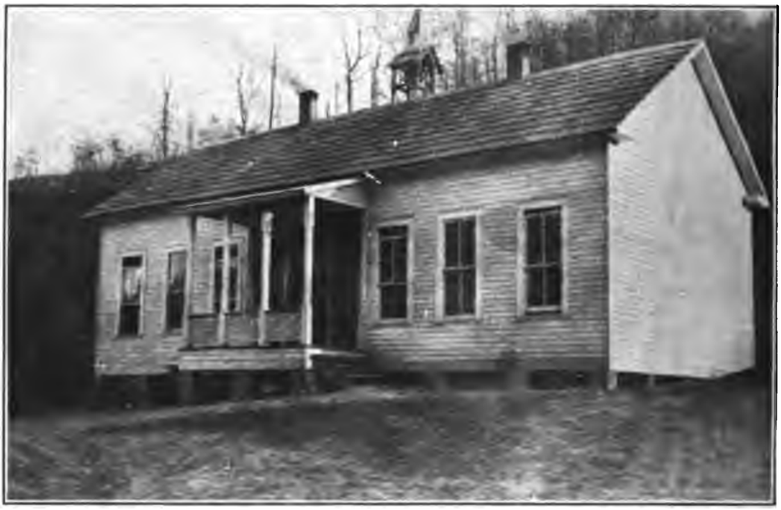
ANOTHER LOG SCHOOLHOUSE; ESTIMATED VALUE, $120.



LOG SCHOOLHOUSE OF A TYPE FAST DISAPPEARING.



INTERIOR OF THE LOG SCHOOLHOUSE SHOWN ABOVE.



A MOUNTAIN CONSOLIDATED SCHOOL OF TWO ROOMS IN CLAY COUNTY, KY.

A PRIVATE SCHOOL (THE LARGE BUILDINGS ON THE RIGHT) IN A MOUNTAIN VILLAGE.

In Virginia certificates are issued on State-wide examinations, the same for the first, second, and third grades, save that there are additional subjects for higher certificates. A little over 17 per cent of the teachers in the Appalachian counties hold third-grade certificates, and the percentage in individual counties varies from 0 to 39.

In Tennessee certificates in the past have been issued by the county superintendents on examinations prepared and graded by themselves. The law has now been changed, and State-wide examinations will be given there in the future.

The reports from Georgia, North Carolina, Tennessee, Virginia, and West Virginia show the number and percentage of teachers with some normal school training in those States. The facts in this respect are indicated below. This includes graduates and those who have had but a single summer school course as well. Very few are normal graduates.

| | Georgia. | North Carolina. | Tennessee. | Virginia.[1] | West Virginia. |
|---|---|---|---|---|---|
| Per cent of teachers in Appalachian counties with some normal training | 15 | 39 | 5 | 15 | 7 |
| Variation of this percentage among counties | 0–49 | 7–93 | 0–26 | 0–39 | 0–42 |

[1] In Virginia these figures are for teachers holding first-grade or higher certificates.

Supervision of teachers in service, in the strict sense of the word, is very rare. In West Virginia a system of supervision by magisterial districts is being developed, and in Kentucky assistants to the county superintendents are appointed in some of the counties. Experiments in these particulars are being made in some of the other States, but in the main the entire supervision is given by the county superintendents.

In all of the States except North Carolina the county superintendent must be a legal resident of the county in which he serves. The county board of North Carolina may secure a superintendent from outside of the county or State. In any of the States it is practically impossible for the county superintendent to do more than visit each school once, or possibly twice, during the school year. The average number of white schools in an Appalachian county is 76. The average length of the school term is 112 days. By the time a superintendent has attended to necessary office work he is fortunate if he can spend more than two or three hours in each school during the entire year. Such visits as he is able to make, even in the case of competent men, can amount to little more than the most cursory inspection In practice, at any rate, it seldom amounts to more.

Teachers' institutes of about a week's duration are very generally held in each county of the Appalachian regions, as in other counties in the States. These institutes are usually held during the summer, with one or more instructors employed from outside of the county. The value of such institutes depends largely on the men employed.

Teachers' training courses in connection with the county high schools have been held in a few instances. Cumberland County, Tenn., may be given as an example. The teacher-training course in 1913 lasted four months. The work began in February, after the country schools closed, and was in charge of the county superintendent. The course was open to any teachers, or any who expected to become teachers. The work consisted largely of reviews of the elementary subjects, with emphasis on methods of instruction. Teachers were allowed to take a part of the normal work, and to spend the rest of their time in the regular high-school courses if they desired to do so. Over 30 of the teachers of the county enrolled.

In several counties throughout the Appalachian section private schools are giving special courses for training teachers. For example, in Blount County, Tenn., there were two private institutions doing normal work. In the other four counties visited there were no facilities for professional training.

Teachers' salaries vary a great deal, not only from county to county, but also within a single county. Table 9 shows the variation of the average annual salary in different counties, and Table 10 shows the variation of salaries within seven counties that were investigated in this respect.

TABLE 9.—*Average salaries paid teachers in the Appalachian counties.*

| Average salary paid teachers for school year. | Number of counties. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | In Alabama. | In Georgia. | In Kentucky. | In North Carolina. | In South Carolina. | In Tennessee. | In Virginia. | In West Virginia. | In the entire region. |
| $100-$120 | | 4 | | 4 | | 1 | | | 9 |
| $120-$140 | | 3 | | 6 | | 1 | 1 | | 11 |
| $140-$160 | | 5 | | 4 | | 8 | 2 | | 19 |
| $160-$180 | | 1 | | 3 | | 9 | 3 | | 16 |
| $180-$200 | | 1 | | 3 | | 3 | 6 | 1 | 14 |
| $200-$220 | 3 | 1 | | 4 | 1 | 10 | 2 | 4 | 25 |
| $220-$240 | 4 | 3 | 1 | | | 1 | 5 | 1 | 15 |
| $240-$260 | 3 | 1 | 7 | | 4 | 3 | 8 | 3 | 29 |
| $260-$280 | 2 | 1 | 10 | | | 3 | 5 | 5 | 26 |
| $280-$300 | 2 | | 7 | | | 1 | 3 | 2 | 15 |
| $300-$320 | 3 | | 3 | | | 1 | 1 | 2 | 10 |
| $320-$340 | 1 | | 2 | | | | 2 | | 5 |
| $340-$360 | 1 | | | | | | | 3 | 4 |
| $360-$380 | | | 1 | 1 | | 2 | 1 | | 5 |
| $380-$400 | 1 | | | | | 1 | | 1 | 3 |
| $400-$420 | | | | | | | | | |
| $420-$440 | | 1 | | | | | | | 1 |
| $440-$460 | | | | | | 1 | 1 | 3 | 5 |
| $460-$480 | 1 | | | | | | | | 1 |
| $480-$500 | | | | | | | | | |
| $500-$520 | 1 | | | | | | | | 1 |
| Total counties included. | 22 | 21 | 31 | [1] 25 | 5 | [1] 45 | 40 | 25 | 214 |

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[1] One county in Tennessee reports an average salary of $655, and 1 in North Carolina reports an average of $56.

**Table 10.**—*Salaries received by teachers in seven Appalachian counties.*

| Salaries for school year. | Teachers— | | | | | | |
|---|---|---|---|---|---|---|---|
| | In Blount County, Tenn.,[1] 1913. | In Buchanan County, Va., 1913. | In Cumberland County, Tenn., 1913. | In Hancock County, Tenn., 1913. | In Hawkins County, Tenn. 1913. | In Jackson County, N. C., 1913. | In Wise County, Va., 1912. |
| $40-$60 | ........ | 1 | ........ | 1 | ........ | ........ | ........ |
| $60-$80 | ........ | 3 | ........ | ........ | ........ | ........ | 1 |
| $80-$100 | ........ | 3 | 2 | ........ | ........ | ........ | ........ |
| $100-$120 | ........ | 2 | ........ | 4 | ........ | ........ | 3 |
| $120-$140 | 1 | 3 | 2 | 4 | 1 | 36 | 3 |
| $140-$160 | 7 | 8 | 13 | 5 | 7 | 2 | 5 |
| $160-$180 | 28 | 3 | 18 | 33 | 8 | ........ | 8 |
| $180-$200 | 41 | 1 | ........ | ........ | 27 | 2 | 13 |
| $200-$220 | 30 | 11 | 21 | 1 | 30 | 3 | 11 |
| $220-$240 | 5 | 4 | 1 | ........ | 12 | 1 | 8 |
| $240-$260 | 1 | 1 | ........ | 3 | 24 | 5 | 8 |
| $260-$280 | 1 | 9 | 1 | 1 | 11 | ........ | 9 |
| $280-$300 | 1 | ........ | ........ | ........ | 2 | 10 | 7 |
| $300-$320 | ........ | 3 | ........ | ........ | 2 | 3 | 6 |
| $320-$340 | ........ | ........ | 1 | ........ | ........ | 5 | 2 |
| $340-$360 | ........ | ........ | ........ | ........ | ........ | ........ | 2 |
| $360-$380 | ........ | 3 | ........ | ........ | 1 | ........ | 8 |
| $380-$400 | ........ | ........ | ........ | ........ | ........ | ........ | 2 |
| $400-$420 | ........ | 1 | 4 | ........ | ........ | 4 | 22 |
| $420-$440 | ........ | ........ | ........ | ........ | ........ | 1 | 3 |
| $440-$460 | ........ | 3 | 1 | ........ | ........ | ........ | 11 |
| $460-$480 | ........ | ........ | ........ | ........ | ........ | ........ | 1 |
| $480-$500 | ........ | 1 | 1 | ........ | ........ | 1 | 6 |
| $500-$600 | ........ | ........ | 1 | ........ | ........ | 3 | 8 |
| $600-$800 | ........ | ........ | 1 | 2 | ........ | 1 | 3 |
| $800 and over | ........ | 1 | 1 | ........ | ........ | 2 | 7 |

[1] Salaries of 12 teachers in Maryville not included.

The median of the county average is $237. That is, in 108 counties the average salary is more than $237, and in 108 counties the average salary is less than $237. This figure is probably very nearly the average salary in this region. With an average term of 112 days, the average pay for a teacher is therefore very nearly $2 per day. The nature of averages, however, is such that there are probably many more teachers who receive less than $237 per year than there are who receive more than that. If we had six teachers receiving $100 a year and one receiving $1,000 a year, the average salary would be $225 a year. The single high salary makes the average misrepresent the actual conditions. Table 10 shows how these averages are made up.

In most of the counties there is nothing to insure higher salaries or precedence to teachers holding higher-grade certificates. In many instances a holder of a third-grade certificate may make application for the same school for which the holder of a first-grade certificate has applied. In some instances holders of third-grade certificates actually receive higher salaries than some of the holders of first-grade certificates in the same county; or they are employed while holders of first-grade certificates can not get schools. This is true, of course, in counties in other sections. A few of the counties pay salaries according to the grade of certificate held; e. g., $30 a month for a third-grade certificate, $35 for a second-grade, and $40 for a first-grade.

While salaries are very low, living expenses, too, are low. In Blount County, Tenn., board and room for the teacher costs from $8 to $12 per month; in Buchanan County, Va., from $6 to $16; in Cumberland County, Tenn., $10 to $15; in Hancock County, Tenn., $5 to $9; in Hawkins County, Tenn., $10 to $15; in Wise County, Va., $10 to $25 in some of the mining towns; and so on. These figures probably are representative of the entire region outside of the large cities.

Even with living expenses as low as they are, it is still true that many of the teachers do not receive a salary large enough to support them for the entire year. This means that they must work at something else, and if they have ability enough to succeed at this other work, they soon stop teaching. Teaching is no more a profession in this section than in the rural portion of most other sections of the country.

In some localities living conditions are such that it is difficult to find teachers who will stay. This accounts for the shortness of some of the school terms and for the lack of schools in some communities. One county superintendent reported that he had solved this problem in his county by turning the school funds for these communities over to church mission boards, and asking them to provide teachers. Three of the six superintendents visited are trying to solve the problem by getting children from these communities to go elsewhere to school, and then return to their home counties to teach. Two of them report that they have found it difficult to get the young people back into these communities after they have once got away.

The average enrollment per teacher for counties varies from 26 to 70. For the entire region the average is 40. These averages are in few cases excessive. Table 11 shows the enrollment per individual teacher in six counties.

Throughout almost the entire region, outside of the cities, text-books must be furnished by the parents. Most of the States have laws providing for the purchasing of text-books for pupils whose parents can not buy them, but these laws are applied only in extreme cases. In very many of the schools the work is hampered by shortage of text-books.

Not only are the texts often inadequate, but also they are often ill-adapted to use in mountain schools. In one school in a place where wagons could not go children were found reading a story of the personal reminiscences of a street-car horse in New York City. A little girl was found crying on the way home from school because she had misspelled "bohea." A geography class was found naming the three highest peaks in the world, but the pupils did not know in what mountain system they lived nor into what ocean the water in the creek in front of the schoolhouse flowed.

TABLE 11.—*Numbers of pupils enrolled per teacher in six Appalachian counties.*

| Pupils enrolled. | Teachers. | | | | | |
|---|---|---|---|---|---|---|
| | In Blount County, Tenn., 1913.[1] | In Buchanan County, Va., 1913. | In Cumberland County, Tenn., 1913. | In Hancock County, Tenn., 1913. | In Hawkins County, Tenn., 1913.[2] | In Wise County, Va., 1912. |
| 10-15 | 2 | 5 | 1 | 1 | | 5 |
| 15-20 | 1 | 3 | 7 | | | |
| 20-25 | 3 | 7 | 5 | 2 | 2 | 7 |
| 25-30 | 10 | 6 | 7 | 1 | 4 | 6 |
| 30-35 | 11 | 9 | 8 | 3 | 6 | 13 |
| 35-40 | 12 | 10 | 7 | 6 | 9 | 13 |
| 40-45 | 8 | 3 | 8 | 6 | 8 | 9 |
| 45-50 | 15 | 5 | 7 | 5 | 11 | 4 |
| 50-55 | 10 | 5 | 5 | 4 | 14 | 13 |
| 55-60 | 9 | 1 | 1 | 3 | 8 | 8 |
| 60-65 | 6 | 1 | 3 | 8 | 5 | 8 |
| 65-70 | 10 | | 2 | 3 | 9 | 7 |
| 70-75 | 1 | | | | 1 | 1 |
| 75-80 | 3 | | | 1 | 1 | 2 |
| 80-85 | 1 | 1 | 1 | 5 | | 4 |
| 85-90 | 1 | | 1 | 1 | 1 | 2 |
| 90-95 | 1 | | | 2 | | |
| 95-100 | | | | | | 4 |

[1] Enrollment not given for 12 teachers in Maryville, Blount County.
[2] Enrollment is not available for 46 of the teachers in Hawkins County.

Globes, charts, and apparatus of all sorts must, in many instances, be furnished by the teacher, if they are to be used at all. In one of six counties investigated the teachers even had to buy fuel. The superintendent stated that he had required this in order to avoid overcharging and waste, and that he had raised salaries to cover the estimated expense. The average annual salary in that county was $224 in 1912; out of this fuel was purchased.

Special work—sewing, cooking, woodwork, agriculture, and handwork of various kinds—is being undertaken in a good many of the counties. Buchanan County, Va., has started work in sewing in five schools and has a woodworking shop in connection with one of the two-room schools. Cumberland County, Tenn., has a potato club of about 40 members; a corn-acreage contest, limited to boys, and in charge of a corn demonstrator; a newly organized girls' canning club; and a farmers' cooperative store. Hawkins County, Tenn., has a boys' corn club of about 20 members and five or six debating societies. Wise County, Va., has sewing in some of the schools, a boys' corn club, debating societies rather well organized, taking in a good many one-room schools, and plans were laid for a school fair the following year. There are six high schools in the county and they have a thriving athletic association and an annual declamation contest. Jackson County, N. C., has a county commencement, a boys' corn club, and county declamation, recitation, and spelling contests. These are five of the seven counties investigated in regard to special activities of various kinds. The other two counties reported no special activities in connection with their school work.

Besides these special forms of school work, basket suppers are frequently given in the separate schools to raise funds for school purposes—special equipment, decorations, or libraries. Hawkins County reports $1,486 raised during one year in this way.

School libraries are finding their way into most of this region. Figures are available from all of the States except North and South Carolina. There are 185 Appalachian counties in the six States from which these figures are available, and in only 23 of these counties are no school libraries reported. The number of libraries in a county varies from 1 to 164. In all, 4,089 libraries are reported. The average number of volumes in libraries is over 60 in three-fourths of the counties.

### SCHOOLHOUSES.

The character of schoolhouses varies from the log-cabin type, without glass in the windows and with homemade benches, to the most modern of buildings, fitted with furniture and appliances of the very latest and best design. The average condition is probably below that of other sections of those States.

The value of buildings is the most available figure to represent their general condition, but it must be remembered that building material costs less in the mountains than in most sections of the country and that labor is often donated. The accompanying photographs should give some idea of what is meant by the various values.

Table 12 shows the average values of building by counties and Table 13 shows the value by individual buildings in six counties.

Table 12.—*Average values of school buildings in the Appalachian counties.*

| Average value of school buildings. | Number of counties. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | In Alabama. | In Georgia. | In Kentucky. | In North Carolina. | In South Carolina. | In Tennessee.[1] | In Virginia. | In West Virginia. | In the entire region. |
| Less than $100 | | | 1 | | | | 1 | | 2 |
| $100-$200 | | | | 2 | | 1 | 2 | 1 | 6 |
| $200-$300 | | 3 | 8 | 5 | | 4 | 2 | 3 | 25 |
| $300-$400 | 2 | 4 | 7 | 4 | | 3 | 8 | 2 | 25 |
| $400-$500 | 2 | 2 | 6 | 1 | | 7 | 1 | 4 | 23 |
| $500-$600 | 3 | 2 | 5 | 2 | | 9 | 2 | 3 | 26 |
| $600-$700 | 2 | 2 | 2 | 5 | | 4 | 4 | 1 | 20 |
| $700-$800 | 4 | 1 | | 3 | | 4 | 5 | | 17 |
| $800-$900 | 2 | 2 | 1 | | 2 | 3 | 3 | 2 | 15 |
| $900-$1,000 | 1 | 1 | | 1 | 1 | 1 | | 2 | 7 |
| $1,000-$1,100 | 2 | | | | | | 1 | | 3 |
| $1,100-$1,200 | | 1 | | | | 1 | 1 | | 3 |
| $1,200-$1,300 | | | | 2 | | 1 | 6 | 1 | 10 |
| $1,300-$1,400 | | 1 | | | 1 | | 4 | 1 | 7 |
| $1,400-$1,500 | | 1 | | | | | | 2 | 3 |
| $1,500-$1,600 | | | | | | 1 | 1 | | 2 |
| $1,600-$1,700 | | | | | | 1 | | | 1 |
| $1,700-$1,800 | 1 | | | | | | 1 | 1 | 3 |
| $1,800-$1,900 | 1 | | | | | | | 1 | 2 |
| $1,900-$2,000 | | | | 1 | 1 | | | 1 | 3 |
| $2,000-$3,000 | 1 | | | | | 1 | 1 | | 3 |
| $3,000 and over | 1 | 1 | 1 | | | 3 | 2 | | 8 |
| Total counties included. | 22 | 21 | 31 | 26 | 5 | 44 | 40 | 25 | 214 |

[1] Information is not available from 2 counties in Tennessee.

TABLE 13.—*Values of school buildings in six Appalachian counties.*

| Value of school buildings. | Buildings. | | | | | |
|---|---|---|---|---|---|---|
| | In Blount County, Tenn., 1913. | In Buchanan County, Va., 1912.[1] | In Cumberland County, Tenn., 1913. | In Hancock County, Tenn., 1913. | In Hawkins County, Tenn., 1913. | In Wise County, Va., 1912. |
| Less than $100 | ......... | ......... | 8 | ......... | 1 | 2 |
| $100-$200 | 13 | 1 | 5 | 6 | 5 | 7 |
| $200-$300 | 14 | ......... | 6 | 4 | 7 | 7 |
| $300-$400 | 24 | 5 | 9 | 6 | 19 | 4 |
| $400-$500 | 23 | 1 | 6 | 4 | 12 | 4 |
| $500-$600 | 12 | 9 | 8 | 5 | 7 | 11 |
| $600-$700 | 2 | 9 | 1 | 7 | 5 | 1 |
| $700-$800 | 1 | 16 | ......... | 2 | 13 | 1 |
| $800-$900 | 3 | 2 | 2 | 2 | 3 | 3 |
| $900-$1,000 | ......... | ......... | ......... | ......... | 2 | 2 |
| $1,000-$1,100 | 2 | 2 | 2 | ......... | 5 | 3 |
| $1,100-$1,200 | ......... | ......... | ......... | ......... | ......... | ......... |
| $1,200-$1,300 | ......... | 1 | ......... | 1 | 4 | ......... |
| $1,300-$1,400 | ......... | ......... | ......... | ......... | ......... | ......... |
| $1,400-$1,500 | 1 | ......... | ......... | ......... | ......... | 1 |
| $1,500-$1,600 | ......... | ......... | 1 | 2 | ......... | 2 |
| $1,600-$1,700 | ......... | 2 | ......... | ......... | ......... | ......... |
| $1,700-$1,800 | ......... | ......... | ......... | ......... | ......... | ......... |
| $1,300-$1,900 | ......... | ......... | ......... | ......... | ......... | ......... |
| $1,900-$2,000 | ......... | ......... | ......... | ......... | ......... | ......... |
| $2,000-$3,000 | ......... | 1 | ......... | ......... | 2 | 7 |
| $3,000 and over | 2 | 1 | 2 | 2 | 3 | 11 |

[1] The values of 5 buildings in Buchanan County are not given.

Building is going on at a rapid rate. The figures given for Wise County, Va., are for the year 1911–12. During the year 1912–13 seven new schools were built, and in two instances involving consolidation. This consolidation is made possible by improved road conditions. In Buchanan County, Va., they have rebuilt nearly half of the school buildings in the last four years. Almost 78 per cent of the school funds of the county were used for building purposes in 1912. Cumberland, Hawkins, and Blount Counties, Tenn., are rebuilding at a rate sufficient to replace all school buildings in about 20 years. Hancock County has built nine new buildings in the last two years at an average cost of a little over $500 each.

School consolidation is going on in most of the counties. In all of the six counties visited this is true to some extent. In Hawkins County, Tenn., 31 school buildings have been abandoned through consolidation in the past nine years. Just how far this movement can go in a very mountainous county is difficult to say. It seems reasonable to hope that eventually, with improved roads and by the use of transportation, the average school might be made to serve a territory of 12 square miles. If this can be accomplished, the number of white schools in these 216 counties will be reduced from 16,430 to 8,115. The actual number of schools serving different areas in three counties is shown below.

*Extent of areas served by schools.*

| | Cumberland.[1] | Hawkins. | Wise. |
|---|---|---|---|
| Schools serving— | | | |
| Less than 4 square miles | | 5 | 86 |
| 4 to 8 square miles | 6 | 87 | 17 |
| 8 to 12 square miles | 24 | 9 | 40 |
| Over 12 square miles | 25 | | 9 |

[1] Cumberland is a large county with sparse population. In some sections of the county there are many square miles with few or no inhabitants.

In these counties, at any rate, there are as many schools that serve too small an area as there are that serve too large an area.

There are schools doing from one to four years of high-school work in most of the Appalachian counties. In only 47 of the 216 counties are no such schools reported. Many of the high schools in the mountains have courses of only one or two years above elementary work. In general the character of this high-school work is formal and academic. In some instances, however, definite attempts have been made to introduce agriculture, domestic science, and like subjects into the curriculum and to adjust the high-school work to real community needs.

The counties having no high schools in 1912 were situated mainly in Kentucky and Tennessee, where there were, respectively, 17 and 14 such counties. There were also 5 counties in Georgia, 1 in North Carolina, 4 in Virginia, and 6 in West Virginia with no high schools.[1]

Table 14 shows the number enrolled in high school from every 1,000 children between the ages of 6 and 20, inclusive.

TABLE 14.—*Number of pupils enrolled in high school from every 1,000 children 6 to 20 years of age in the Appalachian counties of six States.*[2]

| Enrolled in high school from every 1,000 children 6 to 20. | Counties. | | | | | | |
|---|---|---|---|---|---|---|---|
| | In Alabama. | In Georgia. | In Kentucky. | In North Carolina. | In Tennessee. | In Virginia. | In the Appalachian region in these States. |
| 0-5 | | 4 | 8 | 2 | 4 | 1 | 17 |
| 5-10 | 3 | 9 | 3 | 4 | 4 | 1 | 24 |
| 10-15 | 4 | 1 | | 4 | 3 | 3 | 15 |
| 15-20 | 4 | 2 | | 6 | 1 | 2 | 15 |
| 20-25 | 6 | | | 1 | 4 | 7 | 18 |
| 25-30 | 1 | | 1 | 1 | 4 | 2 | 9 |
| 30-35 | 1 | | | 1 | 2 | 5 | 9 |
| 35-40 | 2 | | | 2 | 2 | 5 | 11 |
| 40-45 | | | | | 2 | 3 | 5 |
| 45-50 | | | | | 2 | 3 | 5 |
| 50-100 | 1 | | | | 2 | 4 | 7 |
| 100 and over | | 1 | 1 | | | | 2 |
| Total counties included | 22 | 22 | 30 | 22 | 44 | 40 | 180 |

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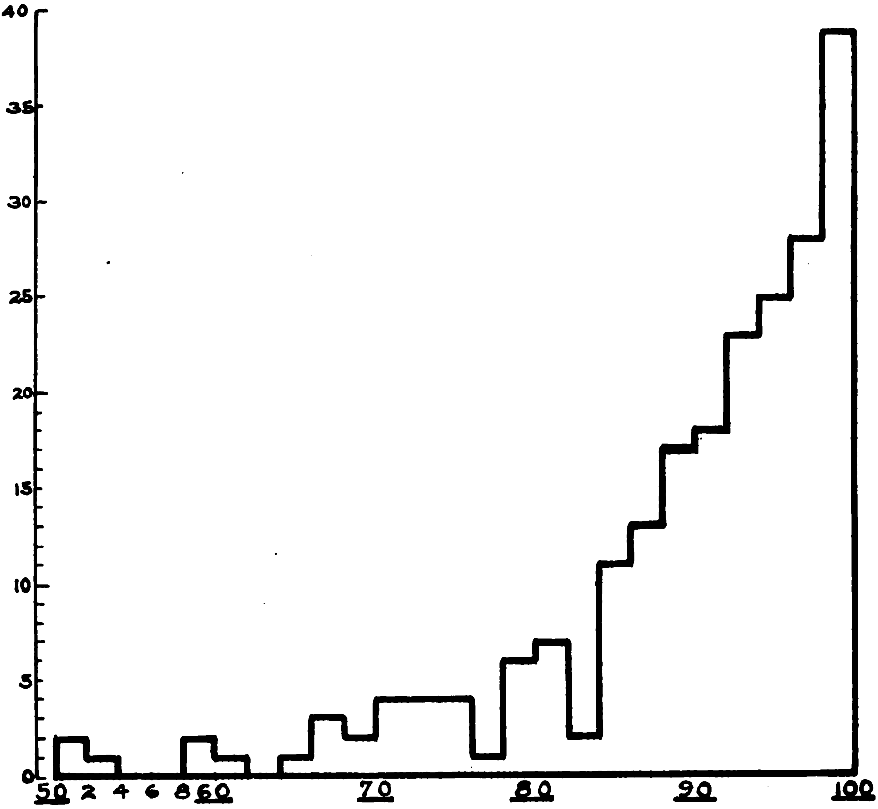
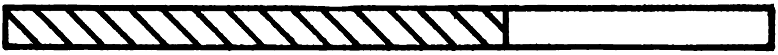
[1] Since 1912 a few additional mountain counties have established high schools.

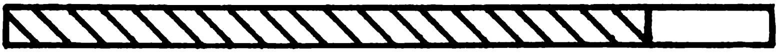
[2] This information is not available from the 30 Appalachian counties in South Carolina and West Virginia. In Georgia, 5 counties have no high school; in Kentucky, 17; in North Carolina, 1; in Tennessee, 14; in Virginia, 4; in the entire Appalachian region in these States, 41.



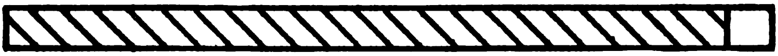
(a) Distribution of different percentages of total population that are native whites of native parentage. (See the last column of table 1.) Percentages are scaled on the horizontal line; the number of counties is scaled vertically. Thus, reading from left to right, there are two counties having between 50 and 52 per cent of their population composed of native whites of native parentage, one county having between 52 and 54 per cent so composed, no counties having between 54 and 58 per cent, and so on across to 39 counties having between 98 and 100 per cent native whites of native parentage.



(b) Percentage of total population of the 8 States that is composed of native whites of native parentage. (The portion representing native whites of native parentage is shaded.)

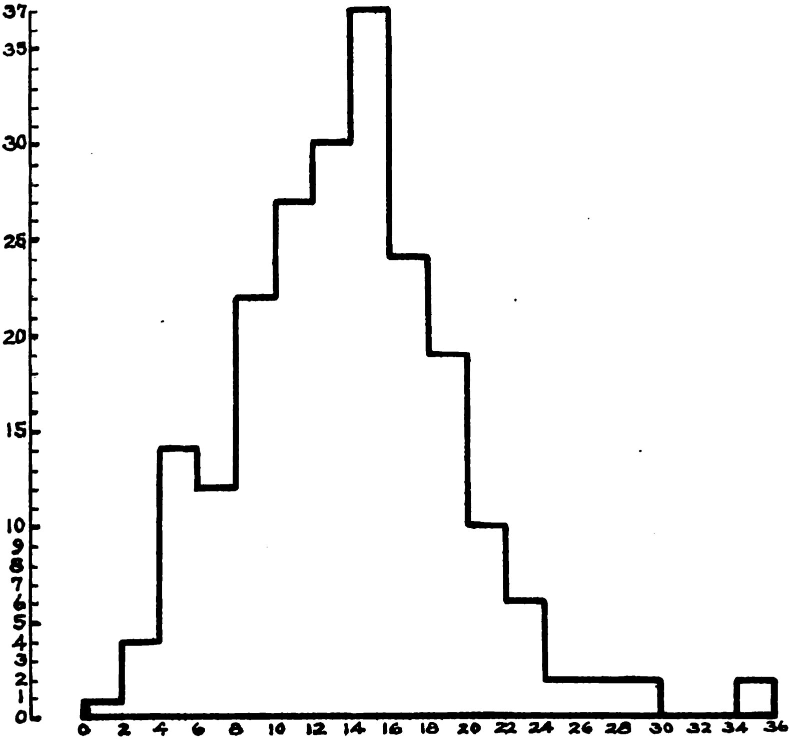


(c) Percentage of total population of the 215 Appalachian counties that is composed of native whites of native parentage.



(d) Percentage of the total population of the 97 "mountain" counties that is composed of native whites of native parentage.

NATIVE WHITES OF NATIVE PARENTAGE.



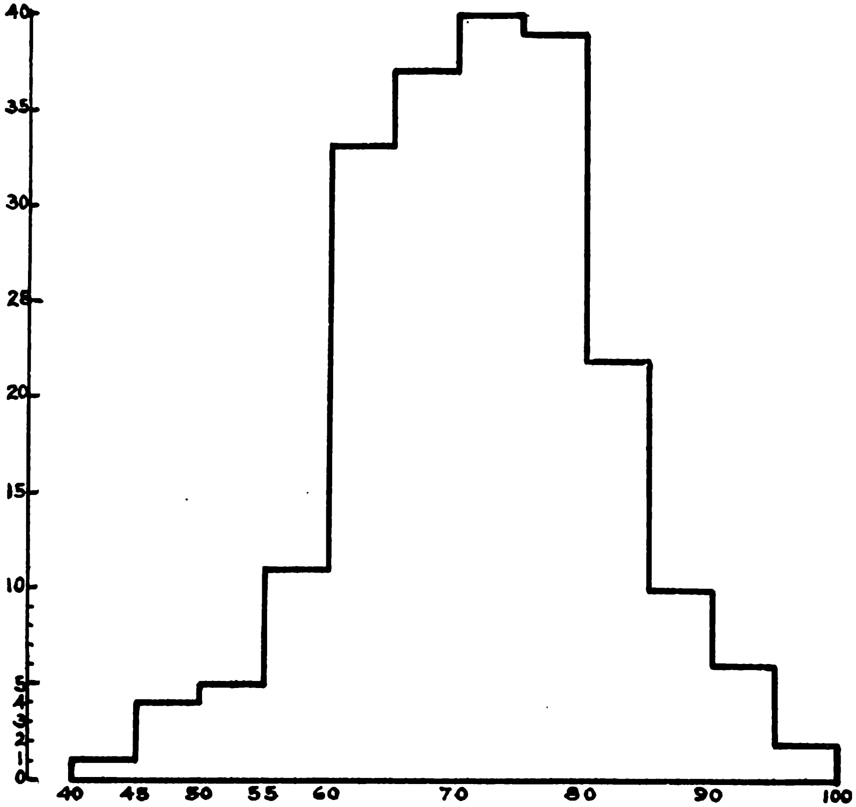
(a) Distribution of different percentages of illiteracy among native whites 10 years of age or over. (See last column of table 2.) Percentages are scaled on the horizontal lines; the number of counties having the different percentages is scaled vertically.

(b) Percentage of illiteracy among native whites throughout the entire 8 States (9.3).

(c) Percentage of illiteracy among native whites throughout the 115 Appalachian counties (12.6).

(d) Percentage of illiteracy among native whites throughout the 97 "mountain" counties (15.9).

NATIVE WHITE ILLITERACY.



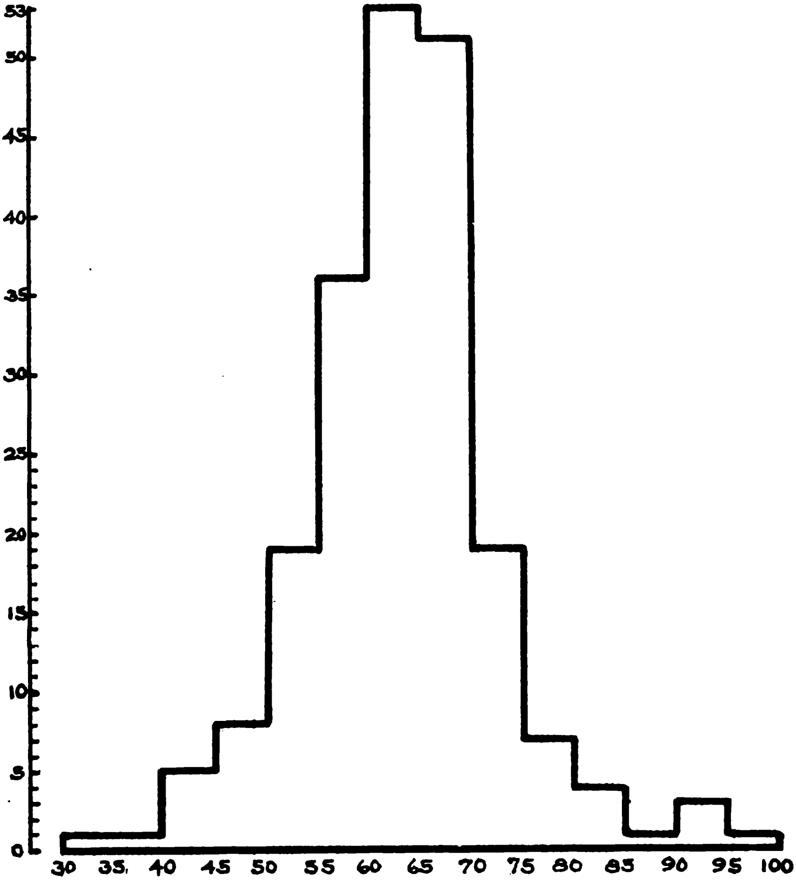
(a) Distribution of the different numbers of children enrolled from every 100 between the ages of 6 and 20, inclusive. (See last column of table 3.) The number enrolled from every 100 is scaled on the horizontal line; the number of counties enrolling the different numbers are shown vertically.

(b) Number enrolled in school from every 100 children throughout the 8 States (63.6).

(c) Number enrolled in school from every 100 children throughout the Appalachian counties (65.9).

(d) Number enrolled in school from every 100 children throughout the "mountain" counties (72.3).

ENROLLMENT FROM EVERY HUNDRED CHILDREN.



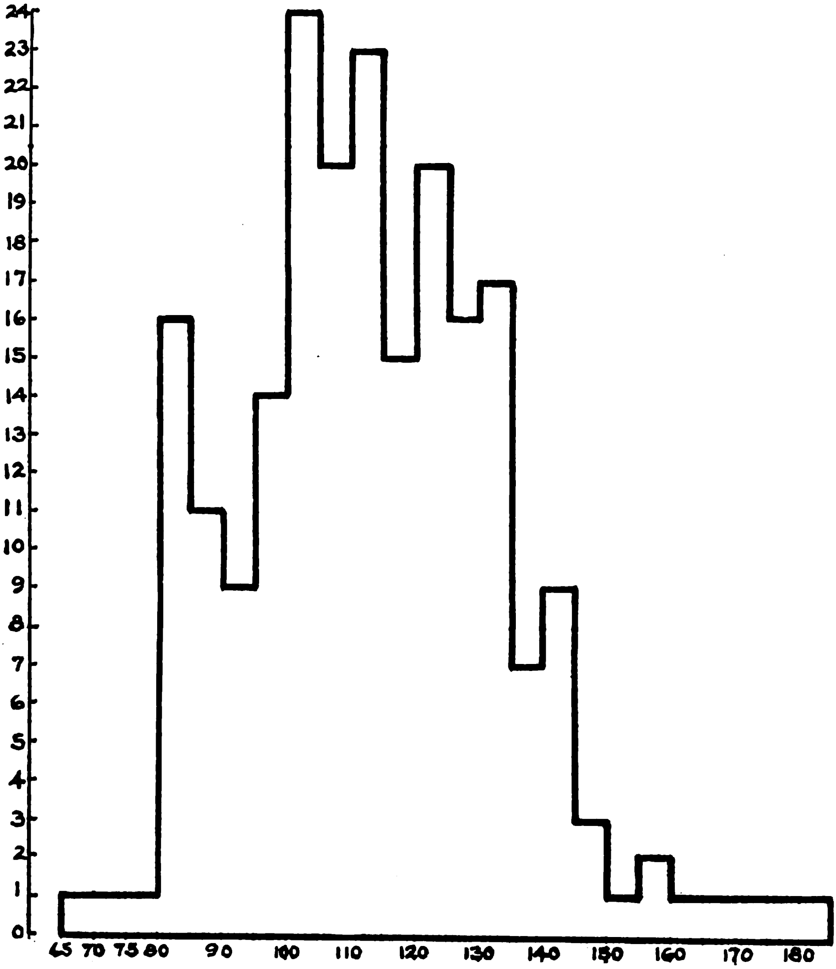
(a) Distribution of the number of children attending daily from every 100 enrolled. (See last column of table 4.) The number of children attending daily is scaled on the horizontal line; the number of counties in which the different numbers of children attend daily is scaled vertically.

(b) Number of children attending school daily from every 100 enrolled throughout the 8 States (63.6).

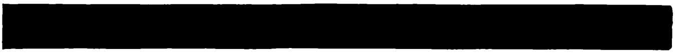
(c) Number of children attending school daily from every 100 enrolled throughout the Appalachian counties (63.1).

(d) Number of children attending school daily from every 100 enrolled throughout the "mountain" counties (61.2).

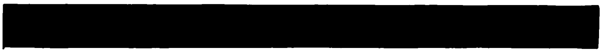
ATTENDANCE DAILY FOR EVERY 100 ENROLLED.



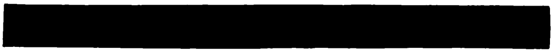
(a) Distribution of the different average lengths of annual school session. (See last column of table 7.) The different number of days of school session are scaled on the horizontal line; the number of counties having the different lengths of session is scaled vertically.



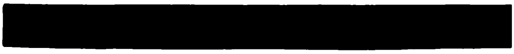
(b) Average length of school session throughout the rural schools of the United States (137 days).



(c) Average length of school session throughout the 8 States (123 days).

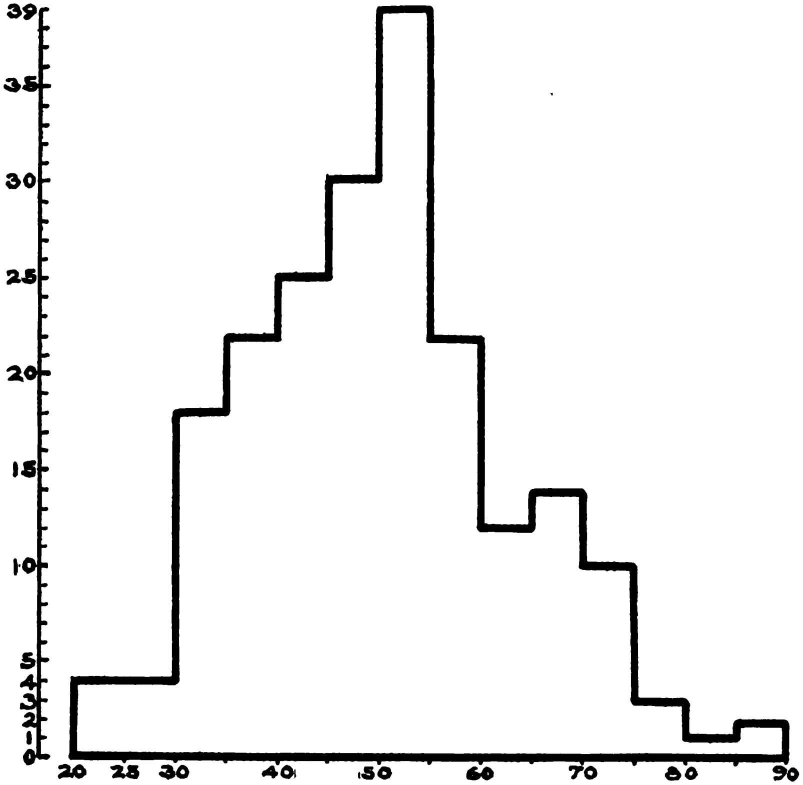


(d) Average length of school session throughout the Appalachian counties (112 days).



(e) Average length of school session throughout the "mountain" counties (104 days).

LENGTH OF SESSION.



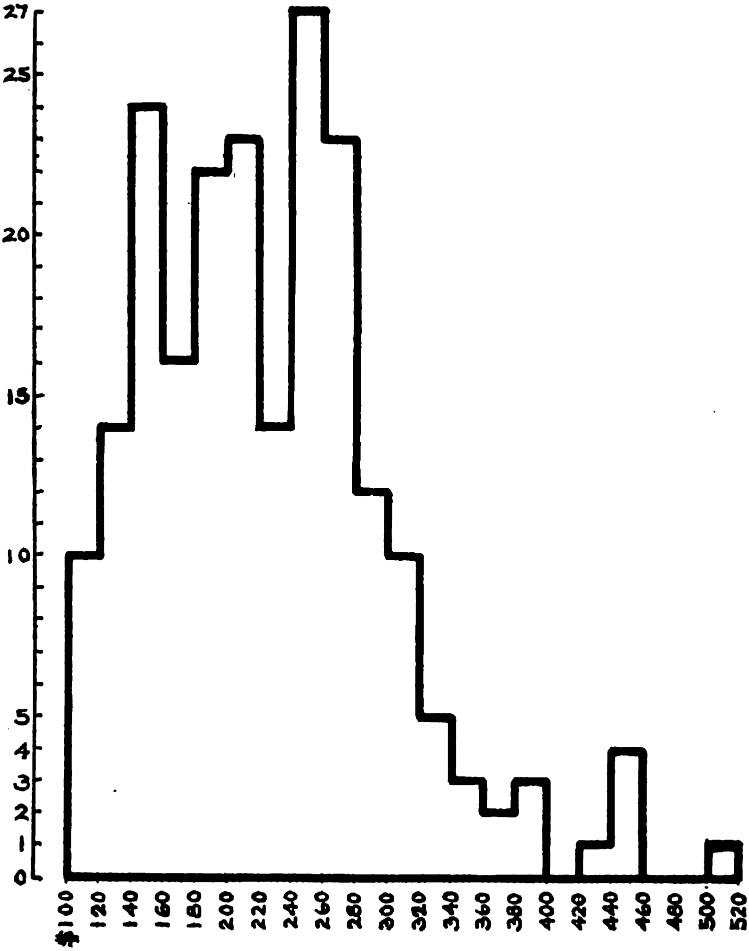
(a) Distribution of the different number of days the average child attends school. (See last column of table 8.) The different numbers of days attended by the average child are scaled on the horizontal line; the number of counties in which the average child attends for these numbers of days is scaled vertically.

(b) Number of days the average child in the 8 States attends school (49.9 days).

(c) Number of days the average child in the Appalachian counties attends school (48.3 days).

(d) Number of days the average child in the "mountain" counties attends school (46 days).

DAYS EACH 6-20-YEAR-OLD CHILD ATTENDS SCHOOL.

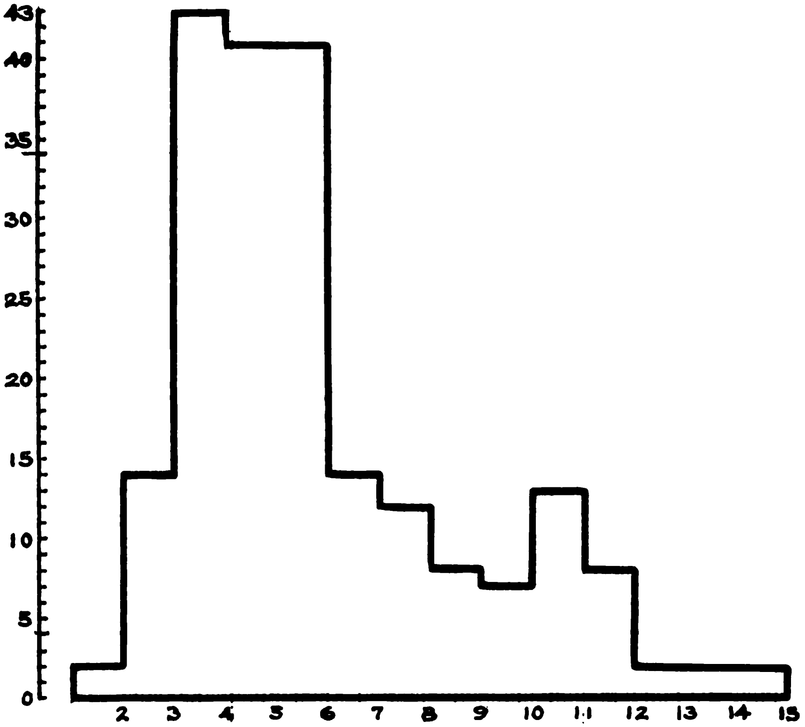


(a) Distribution of annual teachers' salaries. (See last column of tablo 9). Salaries are scaled horizontally; counties vertically.

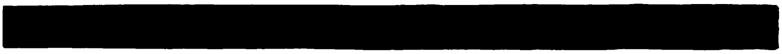
(b) Average annual salary of teachers throughout the United States in 1911 ($466).

(c) Average annual salary of teachers throughout the Appalachian counties ($237).

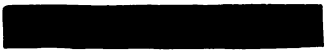
TEACHERS' SALARIES.



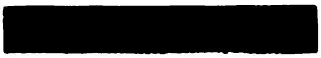
(a) Distribution of the different amounts expended for schools per child of school age. (See last column of table 15.) The amounts expended are scaled horizontally; the counties expending these amounts are scaled vertically.



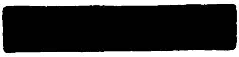
(b) Amount spent for school purposes for the average child throughout the United States in 1911 ($16.09).



(c) Amount spent for school purposes for the average child throughout the 8 States ($6.60).



(d) Amount spent for school purposes for the average child throughout the Appalachian counties ($6.41).



(e) Amount spent for school purposes for the average child throughout the "mountain" counties ($4.72).

EXPENDITURES PER CHILD OF SCHOOL AGE.

## SCHOOL EXPENDITURES.

The annual expenditure per capita of school population (6 to 20, inclusive) in the eight States is $6.60. In the 216 counties of the Appalachian region it is $6.41, and in the 98 mountain counties it is $4.79.

In all statements involving dollars and cents, one must bear in mind that many of the necessaries and comforts of life are cheaper in the mountain region than in many other sections of the country. Nevertheless, the disparity in expenditures for the mountain child and for the child throughout the remainder of the country is too great to be explained in this way, and the opportunities of the children for education in this section are less than elsewhere

Table 15 shows the average expenditure per child in the Appalachian region by counties. It is worthy of note that there are 100 counties in which the annual expenditure for each child of school age is less than $5 and that in two counties it is less than $2. The contrast in educational conditions in this entire region is brought out by the fact that there are 29 counties expending over $10 for each child, and two counties more than $15.

Table 15.—*Amounts expended per child (6–20 years of age) in the Appalachian counties.*

| Expenditure per child 6–20 per school year. | Counties. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | In Alabama. | In Georgia. | In Kentucky. | In North Carolina. | In South Carolina. | In Tennessee. | In Virginia. | In West Virginia. | In the entire region. |
| $1–$2 | | | | | | 2 | | | 2 |
| $2–$3 | 2 | 7 | | 3 | | 1 | 1 | | 14 |
| $3–$4 | 7 | 9 | | 7 | 3 | 14 | 3 | | 43 |
| $4–$5 | 11 | 4 | 10 | 4 | 2 | 6 | 4 | | 41 |
| $5–$6 | 1 | | 17 | 5 | | 10 | 8 | | 41 |
| $6–$7 | | | | 2 | | 6 | 6 | | 14 |
| $7–$8 | | | 1 | 1 | | 4 | 6 | | 12 |
| $8–$9 | | | | | | | 3 | 5 | 8 |
| $9–$10 | | 1 | 1 | 1 | | | 1 | 3 | 7 |
| $10–$11 | 1 | | | | | 2 | 5 | 5 | 13 |
| $11–$12 | | | | | | | 1 | 7 | 8 |
| $12–$13 | | | | | | | | 2 | 2 |
| $13–$14 | | | | | | | 1 | 1 | 2 |
| $14–$15 | | | | | | | 1 | 1 | 2 |
| $15 and over | | | | | | 1 | | 1 | 2 |
| Total counties included. | 22 | 21 | [1] 29 | [1] 23 | 5 | 46 | 40 | 25 | 211 |

[1] Information is not available from 2 of the counties in Kentucky; and Avery, Caldwell, Mitchell, and Watauga Counties in North Carolina have been grouped together and treated as 1 county.

The expenditure per child enrolled and the salary cost per child enrolled show about the same facts as the expenditure per child. The general facts concerning these three items are shown below.

*School expenditures per child.*

| | Expenditure per child 6 to 20 years of age. | Expenditure per child enrolled. | Expenditure for salaries per child enrolled. |
|---|---|---|---|
| In the entire United States in 1911 | $16.09 | $23.56 | $14.06 |
| In rural schools in the United States in 1910 | ........ | ........ | 10.60 |
| In the 8 States | 6.60 | 10.37 | 6.26 |
| In the 216 Appalachian counties | 6.41 | [1]9.58 | [1]6.41 |
| In the 98 mountain counties | 4.79 | [2]6.54 | [2]4.66 |

[1] Information from 2 counties is not available. [2] Information from 1 county is not available.

The percentage of the total school expenditures paid to teachers varies greatly. The amount will, of course, vary as the amount of expenditures for new buildings and equipment varies. The 22 per cent reported paid to teachers in one county is too low even with great activity in building. Percentages over 90, reported in 12 counties, are high and indicate no building activities. The median for the 216 counties is 68.5 per cent, and probably represents the normal proportion for this region at this time. Table 16 shows the variation among the 216 counties in this respect. The 26 counties paying their teachers less than 50 per cent of the total school fund are probably those that are doing much building.

TABLE 16.—*Percentages of school expenditures that are paid to teachers in the Appalachian counties.*

| Paid to teachers from total school expenditure. | Counties. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | In Alabama. | In Georgia. | In Kentucky. | In North Carolina. | In South Carolina. | In Tennessee. | In Virginia. | In West Virginia. | In the entire region. |
| *Per cents.* | | | | | | | | | |
| 20-25 | ...... | ...... | ...... | ...... | ...... | ...... | 1 | ...... | 1 |
| 25-30 | ...... | ...... | ...... | ...... | ...... | 1 | ...... | ...... | 1 |
| 30-35 | ...... | ...... | ...... | 1 | ...... | 1 | ...... | ...... | 2 |
| 35-40 | ...... | ...... | ...... | 1 | ...... | 4 | ...... | 1 | 6 |
| 40-45 | ...... | 1 | 1 | 1 | ...... | 3 | 2 | ...... | 8 |
| 45-50 | ...... | ...... | 1 | 1 | ...... | 4 | 1 | 1 | 8 |
| 50-55 | 2 | ...... | ...... | 4 | ...... | 6 | 5 | 1 | 18 |
| 55-60 | 3 | ...... | 1 | 5 | ...... | 3 | 5 | 2 | 19 |
| 60-65 | 5 | ...... | ...... | 3 | ...... | 8 | 3 | 8 | 27 |
| 65-70 | ...... | ...... | 2 | 3 | 1 | 3 | 10 | 7 | 26 |
| 70-75 | ...... | ...... | 7 | 4 | 1 | 3 | 7 | 5 | 27 |
| 75-80 | 3 | 2 | 9 | 3 | ...... | 2 | 2 | ...... | 21 |
| 80-85 | 3 | 4 | 5 | ...... | 2 | 5 | 4 | ...... | 23 |
| 85-90 | 3 | 6 | 4 | ...... | 1 | 2 | ...... | ...... | 16 |
| 90-95 | 1 | 8 | 1 | ...... | ...... | ...... | ...... | ...... | 10 |
| 95-100 | 2 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | 2 |
| Total counties included | 22 | 21 | 31 | 26 | 5 | [1]45 | 40 | 25 | 215 |

[1] Information not available from 1 county in Tennessee.

### PRIVATE SCHOOLS.

There are two widely prevalent misconceptions concerning private elementary schools in the mountain region. One is that private schools are the only educative agents in this region; the other is that the private schools are so good and so numerous as to be an excuse for poor public schools. Both ideas are based on an overestimation of the extent of private school work. There are people who claim that the private schools in the Appalachian counties do so much of the work done by public schools in some sections of the country that a study of the public schools alone is of little or no real value in determining the educational status of these counties.

Unfortunately, private school statistics are available only from the States of Alabama, Kentucky, Tennessee, and Virginia. These four States, however, may be considered as typical, and they actually represent 139 of the 216 Appalachian counties. In 54 of these 139 counties there are no private schools doing elementary or secondary work. In the 75 counties having private schools the percentage of the total elementary and secondary enrollment that is in private schools varies from three-tenths of 1 per cent to 16.6 per cent. Information for the States individually follows:

In Alabama 2.8 per cent of children in primary and secondary schools are enrolled in private institutions. Of the 22 counties in the Appalachian section of the State, only 9 report any private schools at all. In these 9 counties the variation in percentage of pupils enrolled in private schools is from 1.1 to 8.4.

In Kentucky 3.1 per cent of the total school enrollment is in private schools. There are private institutions doing elementary or secondary work in 19 of the 31 Appalachian counties, and the percentage enrolled in private schools in these 19 counties varies from 0.3 to 13.7.

In Tennessee 2.6 per cent of the total elementary and secondary enrollment is in private schools. There are private schools in 22 of the 46 Appalachian counties, and the percentage enrolled in private schools in these 22 counties varies from 2 to 16.6.

In Virginia 3.8 per cent of the total enrollment in schools below college rank is in private institutions. There are private schools in 25 of the 40 Appalachian counties, and the percentage enrolled in private schools in these counties varies from 0.3 to 14.1.

Where there are successful private schools, they draw students from more than one county. This accounts for the occasional high percentage of pupils in the private schools of a county.

These figures indicate that private elementary and secondary schools are not doing as much of the educational work in these States as is often supposed. They certainly are not taking, and never can take, the place of the public schools. Their function would seem to be either to work in communities where public schools can not be maintained, as indicated previously, or to do work better than the public schools are doing, or to do work of a kind that public schools are not doing, or to supplement the public schools in such a way as to induce the people themselves to demand better public schools. In the last three cases the aim should be to do the work in such a way that it can be imitated by the public schools and that the work may be taken over by the public schools as soon as possible without loss of efficiency. It is unfortunate when the presence of a private school prevents the establishment or improvement of a public school that would do the same work.

This discussion, of course, concerns only elementary and secondary schools. Colleges, normal, professional, and industrial schools, both private and public, deserve special consideration that it is impossible to give in this brief study.

## SUMMARY.

The following general conclusions in regard to educational conditions in the Appalachian region seem warranted by this study.

Conditions vary from the very worst to very nearly the best, and are constantly improving. New buildings are replacing the old; modern equipment is being introduced; the school term is being lengthened; special activities of many kinds are coming to supplement the traditional work; and public sentiment is aroused. The school enrollment, attendance, and term in the entire region are a little worse than throughout the other portions of the States in which the mountains lie; some counties are well above the average, and there are some counties that are very much below any reasonable standard.

Teachers' salaries are low, even when the low cost of living is taken into account. Most of the teachers have little or no professional training. Facilities for such training are increasing, and such training will necessitate higher salaries. Supervision is inadequate. Even good teachers need good supervision; young and untrained teachers, as most of the mountain teachers are, have especial need of assistance and suggestion.

The curriculum is often haphazard, and the texts are a painful misfit. State courses of study, in the States in which they exist, can not meet all the varying need of communities as diverse as the communities in this region. It is very rare for any other course of study to exist, much less be in force, in any locality. Most of the texts used are those written for city schools.

Special activities in the form of parents' clubs, school improvement associations, corn, potato, tomato, and canning clubs, manual training, domestic science and domestic art, debating clubs, athletic meets, and school fairs are being introduced into some communities.

The expenditure for education is very much less than it should be. Nowhere is it as much as the people can afford. Even where rates of taxation are high, the valuation of property is often so low as to make the tax on actual values very low. In Tennessee, where the law requires assessment at full value, it is commonly stated that assessment is usually at about one-third of the value. In one county in that State the county clerk declares that the usual assessment is not more than one-sixth of the full value. But this condition of affairs is not peculiar to those counties or to the States in which they are.

Private schools are supplementing the work of the public schools in many places. Some of the private schools are doing only common-school work, and are doing it no better than the public schools can do it. On the other hand, many of them are doing more and better work than the public schools, and are working in places that the public school has failed to reach.

In many cases efforts at improvement lack definite aim and organization. This is true of the work both of public and of private schools. Some county superintendents follow the definite policy of building new schools in places where the people want them and are willing to help in their building, even though there may be other communities absolutely without school facilities. Private schools are sometimes located without reference to public schools, or even to compete with other private schools that are really meeting the needs of a community. Church schools have been transgressors in this regard. In some instances rather poor private schools are preventing the establishment of public high schools which might be made to serve the people much better.

Public sentiment in favor of good schools is developing; in the several State legislatures representatives from these counties usually favor increased levies or appropriations for schools, and other progressive education measures. This is a fundamental movement, and is the most hopeful aspect of the educational situation. When public opinion—representing appreciation of education, desire for better opportunities for the children, and belief in the ability of the people to help themselves—is fully awake, the conditions here will improve rapidly, as they have done elsewhere.

The way to help these people, the only effective way, is to help them to help themselves.

## STATISTICS.

General information and conclusions have been given in the preceding pages; the detailed information on which these conclusions are largely based is given in the following tables. The information is given in columns, all the information for a single county appearing in the column under the name of that county. The relative standing of a county in respect to a single item may be determined by comparison with the general summary of that item in the preceding pages.

For example, suppose one wishes to find out how Loudoun County, Va., compares with other Appalachian counties in length of school term. Under the column headed "Loudoun County" in the tables of this appendix, opposite item "46" on the left-hand margin of the page, entitled "Length of session, in days," we find 152. That means that the length of the school term in Loudoun County is 152 days. Turning now to Table 7 we find that Loudoun has a longer term than any other Appalachian county in Virginia, that it is the only county having a school session between 150 and 155 days in length, and that there are only six counties in the entire Appalachian region that have longer school terms.

An attempt has been made to include 72 items of information concerning each of the counties. The same information is given for each entire State. Items 1 to 13 and 21 to 30, inclusive, are taken directly from the 1910 census. The other items are taken from the State reports of the respective States, or are calculated from figures taken from these reports or the 1910 census. In making calculations, all remainders have been ignored. The 1911 reports are used for the States of Georgia and Kentucky; for the other States the 1912 reports are used.

The school population is taken as the number of children between the ages of 6 and 20, inclusive. These figures are taken from the 1910 census, and are the same for all States. The legal school age in the respective States is not the same, and so figures from the State reports that have to do with school population are not directly comparable. This is particularly true of the percentage of children enrolled. The use of the uniform 6 to 20 population makes these figures from the different States comparable.

In Alabama and Virginia the school age begins at 7, so that the figures given for those States may not accurately represent the efforts and success of the school authorities of those States enrolling all school children. It does, however, represent what those States are doing for their children between 6 and 20, and is comparable with what other States are doing for the same group of children.

The latest report available has been used for each State. This has been done in order that the information given might be as nearly up to date as possible, and might represent recent progress throughout the entire region. The use of these figures has involved one inaccuracy that is serious. School enrollment figures for 1911–12 have been compared directly with 1910 school population figures. The following reasons seem to justify this action:

First. The 1910 population figure really should be used with the 1911 enrollment, because the 1911 school year began in the fall of 1910, just after the census was taken; the 1911 enrollment represents the number of children enrolled from the total number of school children reported at the beginning of that school year—that is, in 1910. Thus for the States of Georgia and Kentucky no inaccuracy is involved, and in the other States there is only a real discrepancy of one year in the figures used.

Second. The change in population from year to year is relatively slight. The increase in the 6 to 20 population for the six States in question from 1900 to 1910 is given below, together with the approximate annual percentage of increase.

*Population 6 to 20 years of age—Percentage of increase.*

| | Population 6 to 20 years of age. | | Approximate annual percentage of increase. |
|---|---|---|---|
| | 1900 | 1910 | |
| Alabama | 680,451 | 750,347 | 1.0 |
| North Carolina | 699,896 | 785,583 | 1.2 |
| South Carolina | 521,878 | 564,260 | .8 |
| Tennessee | 726,405 | 738,478 | .1 |
| Virginia | 654,284 | 697,649 | .6 |
| West Virginia | 331,508 | 396,818 | 1.9 |

Third. Even this slight increase is added to the base on which percentages are reckoned. The error in the percentages themselves will be less. For example, if there is an error in the base of 1 per cent too little, a percentage of 50 per cent reckoned from this base will be only five-tenths of 1 per cent too high.

Fourth. Any inaccuracy involved in this action tends to make the percentage of enrollment higher than it really is, and thus to make school conditions throughout this region appear a trifle better in this respect than they really are. No injustice is done to any school by this action; rather, they are given a slight advantage.

Fifth. This inaccuracy is so small that the figures as given probably more nearly represent conditions as they now are than would figures reckoned from the older school reports.

All of these reasons seem to justify this action.

These tables have been submitted to the state departments of the respective States.

## *School statistics of Alabama.*

[The mountain counties are in *italic*.]

| | | Entire State. | *Blount* County. | Calhoun County. | Cherokee County. | *Clay* County. | *Cleburne* County. | Cullman County. | *De Kalb* County. | Etowah County. | *Fayette* County. | *Franklin* County. | Jackson County. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Population: | | | | | | | | | | | | |
| 1 | Total | 2,138,093 | 21,456 | 39,115 | 20,226 | 21,006 | 13,385 | 28,321 | 28,261 | 39,109 | 16,248 | 19,369 | 32,918 |
| 2 | White | 1,228,832 | 20,275 | 28,357 | 17,617 | 18,358 | 12,674 | 27,788 | 27,407 | 32,305 | 14,382 | 17,527 | 29,666 |
| 3 | Colored | 908,282 | 1,181 | 10,757 | 2,606 | 2,648 | 711 | 533 | 854 | 6,804 | 1,866 | 1,842 | 3,136 |
| 4 | Per cent colored | 42.5 | 5.5 | 27.5 | 12.9 | 12.6 | 5.3 | 1.9 | 3.0 | 17.4 | 11.5 | 9.5 | 9.5 |
| 5 | Foreign white | 18,956 | 39 | 228 | 15 | 10 | 65 | 859 | 40 | 352 | 8 | 104 | 21 |
| 6 | Per cent foreign | 0.9 | 0.2 | 0.6 | 0.1 | ......... | 0.5 | 3.0 | 0.1 | 0.9 | ......... | 0.5 | 0.1 |
| 7 | Native white of native parentage | 1,177,459 | 20,143 | 27,671 | 17,533 | 18,305 | 12,539 | 25,346 | 27,223 | 31,527 | 14,336 | 17,317 | 29,541 |
| 8 | Per cent native white of native parentage | 55.1 | 93.9 | 70.7 | 86.7 | 87.1 | 93.7 | 89.5 | 96.3 | 80.6 | 88.2 | 89.4 | 89.7 |
| 9 | Urban | 370,431 | ......... | 12,794 | ......... | ......... | 0 | 0 | 0 | 17,383 | 0 | 0 | 0 |
| 10 | Rural | 1,767,662 | 21,456 | 26,321 | 20,226 | 21,006 | 13,385 | 28,321 | 28,261 | 21,726 | 16,248 | 19,369 | 32,918 |
| 11 | Of largest city or village | 132,685 | 609 | 12,794 | 210 | 1,062 | 839 | 2,130 | 1,317 | 10,557 | 636 | 2,046 | 2,125 |
| 12 | Rural, per square mile | 34.5 | 33.1 | 41.8 | 35.1 | 34.2 | 23.6 | 37.1 | 36.0 | 40.1 | 25.3 | 29.9 | 28.9 |
| 13 | Area, square miles | 51,279 | 649 | 630 | 577 | 614 | 568 | 763 | 786 | 542 | 643 | 647 | 1,140 |
| 14 | Average area (square miles) to each white school | 11.0 | 7.9 | 9.0 | 8.3 | 8.9 | 9.9 | 7.9 | 8.0 | 8.2 | 8.6 | 8.6 | 10.6 |
| 15 | **Number of white schools** | 4,635 | 82 | 70 | 69 | 69 | 57 | 96 | 98 | 66 | 74 | 75 | 107 |
| 16 | **Schools necessary to provide 1 for each 12 square miles** | 4,274 | 55 | 53 | 49 | 52 | 48 | 64 | 66 | 46 | 54 | 54 | 95 |
| 17 | Population, 6 to 20 years of age, per school | 114 | 92 | 155 | 90 | 93 | 81 | 106 | 101 | 179 | 68 | 82 | 100 |
| 18 | Population, 6 to 20 years of age, for each 12 square miles | 175 | 144 | 257 | 144 | 139 | 101 | 162 | 157 | 289 | 108 | 129 | 123 |
| 19 | Number of one-teacher schools [1] | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... |
| 20 | Per cent of one-teacher schools [1] | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... |
| 21 | Population 10 years of age and over | 1,541,575 | 14,649 | 28,537 | 13,924 | 14,452 | 9,164 | 19,581 | 19,422 | 27,995 | 11,133 | 13,220 | 22,956 |
| 22 | Illiterate | 352,710 | 2,155 | 4,664 | 2,769 | 1,983 | 1,590 | 1,949 | 2,238 | 4,560 | 1,843 | 2,506 | 4,325 |
| 23 | Per cent of illiterate | 29.9 | 14.7 | 16.3 | 19.9 | 13.7 | 17.4 | 10.0 | 11.5 | 16.3 | 16.6 | 19.0 | 18.8 |
| 24 | Native white 10 years of age and over | 860,279 | 13,753 | 20,310 | 12,559 | 12,600 | 8,602 | 18,349 | 18,779 | 22,496 | 9,850 | 11,739 | 20,673 |
| 25 | Illiterate | 84,768 | 1,824 | 2,163 | 2,084 | 1,303 | 1,388 | 1,813 | 2,051 | 2,913 | 1,373 | 1,949 | 3,519 |
| 26 | Per cent of illiterate | 9.9 | 13.3 | 10.7 | 17.2 | 10.3 | 16.1 | 9.9 | 10.9 | 12.9 | 13.9 | 16.6 | 17.0 |
| 27 | Population 10 to 20 years of age | 526,505 | 5,429 | 9,774 | 4,852 | 5,217 | 3,355 | 7,243 | 7,115 | 9,344 | 4,004 | 4,882 | 8,183 |
| 28 | Illiterate | 86,437 | 526 | 1,246 | 727 | 475 | 366 | 483 | 509 | 1,099 | 412 | 693 | 1,358 |
| 29 | Per cent of illiterate | 16.4 | 9.7 | 12.7 | 15.0 | 9.1 | 10.9 | 6.7 | 7.2 | 11.8 | 10.3 | 14.2 | 16.6 |
| 30 | Population 6 to 20 years of age | 750,357 | 7,912 | 13,644 | 7,073 | 7,593 | 4,881 | 10,403 | 10,385 | 13,305 | 5,875 | 7,014 | 11,774 |
| 31 | School enrollment (public) | 420,288 | 5,253 | 6,788 | 4,071 | 7,260 | 3,360 | 7,554 | 7,138 | 8,368 | 4,606 | 5,294 | 6,057 |
| 32 | **Number enrolled from each 100 of 6 to 20 years of age** | 56.0 | 66.4 | 49.7 | 57.5 | 96.6 | 68.8 | 72.6 | 68.7 | 62.8 | 78.5 | 75.4 | 51.4 |
| 33 | **White enrollment** | 284,016 | 5,122 | 5,765 | 3,796 | 6,785 | 3,255 | 7,416 | 1,950 | [2] 4,682 | 4,147 | 5,020 | 5,770 |
| 34 | **Colored enrollment** | 136,272 | 131 | 1,023 | 281 | 475 | 105 | 138 | 198 | [2] 425 | 459 | 274 | 287 |
| 35 | **Number of private schools** | 80 | 0 | 3 | 1 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 |
| 36 | **Private school enrollment, elementary and high schools** | 12,503 | 0 | 148 | 56 | 0 | ......... | 452 | ......... | ......... | ......... | ......... | ......... |
| 37 | **Public and private school enrollment** | 432,791 | ......... | 6,936 | 4,127 | ......... | ......... | 8,006 | ......... | ......... | ......... | ......... | ......... |
| 38 | **Per cent enrolled in private schools** | 2.8 | ......... | 2.1 | 1.3 | ......... | ......... | 5.6 | ......... | ......... | ......... | ......... | ......... |

| | PUBLIC SCHOOLS. | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 39 | Average attendance | 252,828 | 3,154 | 3,931 | 2,199 | 2,989 | 1,644 | 4,568 | 4,145 | 3,150 | 3,200 | 2,472 | 3,679 |
| 40 | White | 172,066 | 3,070 | 3,188 | 1,999 | 2,741 | 1,568 | 4,481 | 4,057 | 2,900 | 2,871 | 2,334 | 3,494 |
| 41 | Colored | 80,762 | 84 | 743 | 200 | 248 | 76 | 87 | 88 | 250 | 329 | 138 | 185 |
| 42 | Number attending daily in each 100 enrolled | 60.1 | 60.0 | 57.9 | 54.0 | 41.1 | 48.9 | 60.4 | 58.0 | 61.6 | 69.4 | 46.6 | 60.7 |
| 43 | White | 65 | 59 | 55 | 52 | 40 | 48 | 60 | 58 | 61 | 69 | 46 | 60 |
| 44 | Colored | 59 | 64 | 72 | 71 | 52 | 72 | 63 | 44 | 58 | 71 | 50 | 64 |
| 45 | Number attending daily in each 100 of 6 to 20 years of age | 33.6 | 49.8 | 28.8 | 31.1 | 39.3 | 33.7 | 43.9 | 39.9 | 38.6 | 54.4 | 35.2 | 31.2 |
| 46 | Length of session, in days | 116 | 108 | 138 | 101 | 105 | 112 | 114 | 108 | 126 | 100 | 82 | 97 |
| 47 | Number of days each child enrolled attended | 69.7 | 64.8 | 79.9 | 54.5 | 43.1 | 54.7 | 68.8 | 62.6 | 77.6 | 69.4 | 40.2 | 58.8 |
| 48 | Number of days each child 6 to 20 years of age attended | 38.9 | 53.7 | 39.7 | 31.4 | 41.2 | 37.7 | 50.0 | 43.0 | 48.6 | 54.4 | 28.8 | 30.2 |
| 49 | Number of teachers | 9,442 | 108 | 136 | 82 | 103 | 69 | 111 | 117 | 84 | 97 | 112 | 141 |
| 50 | Enrollment per teacher | 44 | 48 | 49 | 49 | 70 | 48 | 68 | 61 | 60 | 47 | 47 | 43 |
| 51 | Teachers' salaries | $2,811,082 | $26,417 | $52,357 | $17,704 | $30,812 | $15,288 | $33,929 | $32,532 | $43,502 | $22,606 | $23,865 | $33,668 |
| 52 | Average annual salary | $297 | $244 | $384 | $215 | $299 | $221 | $305 | $278 | $517 | $233 | $213 | $238 |
| 53 | Teachers with normal or college training [2] | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 54 | Per cent of teachers with normal or college training [2] | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 55 | Teachers holding third-grade or temporary certificates | 3,428 | 32 | 36 | 45 | 46 | 31 | 60 | 31 | 22 | 21 | 38 | 58 |
| 56 | Per cent of teachers holding third-grade or temporary certificates | 36 | 29 | 25 | 54 | 44 | 44 | 54 | 26 | 26 | 22 | 33 | 41 |
| 57 | Total school expenditures | $3,547,955 | $30,440 | $65,140 | $19,859 | $37,586 | $17,793 | $39,070 | $38,849 | $45,233 | $27,076 | $31,690 | $41,122 |
| 58 | Amount received from State | $2,004,945 | $23,475 | $38,234 | $17,876 | $19,253 | $12,672 | $28,049 | $27,134 | $34,233 | $15,000 | $19,830 | $31,856 |
| 59 | Per cent received from State | 56 | 77 | 58 | 90 | 51 | 71 | 71 | 69 | 75 | 55 | 62 | 77 |
| 60 | Expenditure per child enrolled | $8.44 | $5.79 | $9.59 | $4.87 | $5.17 | $5.29 | $5.17 | $5.44 | $5.40 | $5.83 | $5.98 | $6.78 |
| 61 | Expenditure per child enrolled 6 to 20 years of age | $4.72 | $3.84 | $4.77 | $2.80 | $4.95 | $3.64 | $3.75 | $3.74 | $3.39 | $4.60 | $4.51 | $3.49 |
| 62 | Per cent of expenditures used for teachers' salaries | 79.2 | 86.7 | 8.03 | 89.1 | 81.9 | 85.9 | 86.8 | 83.7 | 96.1 | 83.4 | 75.3 | 81.8 |
| 63 | Tuition per child enrolled | $6.68 | $5.01 | $7.70 | $4.33 | $4.23 | $4.54 | $4.48 | $4.55 | $5.18 | $4.86 | $4.50 | $4.54 |
| 64 | Tuition per child enrolled 6 to 20 years of age | $3.73 | $3.33 | $3.83 | $2.49 | $3.95 | $3.12 | $3.25 | $3.13 | $3.25 | $3.83 | $3.39 | $2.85 |
| 65 | Value of school buildings | $7,065,319 | $42,475 | $146,490 | $36,225 | $69,150 | $34,830 | $59,175 | $68,100 | $95,000 | $31,600 | $41,075 | $57,745 |
| 66 | Average value of school building | $1,343 | $499 | $1,808 | $575 | $959 | $710 | $657 | $740 | $1,759 | $368 | $775 | $589 |
| 67 | Number of school libraries [3] | 970 | 5 | 11 | 4 | 13 | 3 | 13 | 3 | 12 | 7 | 10 | 10 |
| 68 | Number of volumes in libraries | 168,300 | 285 | 2,485 | 411 | 952 | 123 | 600 | 115 | 100 | 355 | 630 | 1,080 |
| 69 | Average number of volumes | 120 | 57 | 225 | 102 | 73 | 41 | 44 | 38 | 8 | 70 | 63 | 108 |
| 70 | Circulating libraries used [1] | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 71 | Enrolled in high school [4] | 18,784 | 68 | 258 | 65 | 433 | 63 | 201 | 159 | 211 | 33 | 172 | 146 |
| 72 | Enrolled in high school in every 100 of population 6 to 20 years of age | 2.52 | .85 | 1.88 | .91 | 5.70 | 1.29 | 1.93 | 1.53 | 1.58 | 0.56 | 2.45 | 1.24 |

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[1] No data.

[2] In country only.

[3] We have a few circulating libraries. Talladega County in 1912 had 16 best libraries and 10 school libraries on the circulating plan. During the present year 10 have been added, making 38.—(Extract from a letter from State superintendent of education dated July 2, 1913.)

[4] Public and county high schools; there are also 2,900 pupils in private and denominational secondary schools, 1,082 in the 9 State agricultural schools, and 2,781 doing academic work in normal schools. This makes a total of 25,547 pupils in the State doing high-school work.

*School statistics of Alabama*—Continued.

[The mountain counties are in *italic*.]

| | | Jefferson County. | Limestone County. | Madison County. | *Marion* County. | *Marshall* County. | Morgan County. | *St. Clair* County. | Shelby County. | Talladega County. | Walker County. | *Winston* County. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Population: | | | | | | | | | | | |
| 1 | Total | 226,476 | 26,880 | 47,041 | 17,495 | 28,553 | 33,781 | 20,715 | 26,949 | 37,921 | 37,013 | 13,855 |
| 2 | White | 135,839 | 16,625 | 28,146 | 16,975 | 27,188 | 25,581 | 17,083 | 19,308 | 19,577 | 30,475 | 12,801 |
| 3 | Colored | 90,617 | 10,255 | 18,894 | 520 | 1,365 | 8,198 | 3,632 | 7,641 | 18,265 | 6,538 | 54 |
| 4 | Per cent colored | 40.0 | 43.9 | 45.5 | 3.0 | 4.8 | 24.3 | 17.5 | 28.4 | 48.1 | 17.7 | 0.4 |
| 5 | Foreign white | 7,832 | 82 | 196 | 8 | 14 | 251 | 153 | 109 | 143 | 466 | 35 |
| 6 | Per cent foreign | 3.5 | 0.3 | 0.4 | ... | ... | 0.7 | 0.7 | 0.4 | 0.4 | 1.3 | 0.3 |
| 7 | Native white of native parentage | 116,830 | 16,318 | 27,499 | 16,931 | 27,124 | 24,715 | 16,843 | 18,928 | 19,321 | 29,382 | 12,652 |
| 8 | Per cent native white of native parentage | 51.6 | 60.7 | 58.5 | 96.8 | 95.0 | 73.2 | 81.3 | 70.2 | 51.0 | 79.4 | 98.4 |
| 9 | Urban | 143,594 | 0 | 7,611 | 0 | 0 | 10,346 | 0 | 0 | 5,854 | 2,509 | 0 |
| 10 | Rural | 82,927 | 26,880 | 39,923 | 17,495 | 28,553 | 23,435 | 20,715 | 26,949 | 32,067 | 34,504 | 13,855 |
| 11 | Of largest city or village | 132,685 | 1,715 | 7,611 | 422 | 1,544 | 6,118 | 685 | 1,079 | 5,854 | 2,509 | 1,111 |
| 12 | Rural, per square mile | 73.1 | 45.1 | 48.6 | 23.5 | 47.4 | 39.9 | 32.1 | 33.4 | 42.5 | 44.4 | 20.4 |
| 13 | Area, square miles | 1,135 | 596 | 811 | 743 | 602 | 587 | 645 | 806 | 755 | 777 | 630 |
| 14 | Average area (square miles) to each white school | 6.6 | 8.9 | 11.4 | 9.1 | 7.1 | 7.6 | 8.9 | 9.9 | 12.1 | 7.4 | 9.5 |
| 15 | Number of white schools | 171 | 67 | 71 | 81 | 84 | 77 | 72 | 81 | 62 | 105 | 66 |
| 16 | Schools necessary to provide 1 for each 12 square miles | 95 | 50 | 68 | 62 | 51 | 49 | 54 | 68 | 63 | 65 | 53 |
| 17 | Population, 6 to 20 years of age, per school | 257 | 136 | 152 | 80 | 121 | 123 | 96 | 92 | 123 | 105 | 71 |
| 18 | Population, 6 to 20 years of age, for each 12 square miles | 704 | 193 | 244 | 106 | 206 | 230 | 141 | 141 | 224 | 194 | 89 |
| 19 | Number of one-teacher schools [1] | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 20 | Per cent of one-teacher schools [1] | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 21 | Population 10 years of age and over | 174,724 | 18,981 | 34,607 | 11,685 | 19,521 | 24,621 | 14,523 | 19,093 | 26,777 | 25,780 | 8,557 |
| 22 | Illiterate | 23,350 | 5,460 | 7,968 | 1,664 | 2,473 | 3,772 | 2,103 | 3,884 | 6,358 | 4,184 | 1,074 |
| 23 | Per cent of illiterate | 13.4 | 28.8 | 23.0 | 14.2 | 12.7 | 15.3 | 14.5 | 20.3 | 23.7 | 16.2 | 12.6 |
| 24 | Native white 10 years of age and over | 93,713 | 11,571 | 20,485 | 11,336 | 18,535 | 18,179 | 11,735 | 13,409 | 13,972 | 20,316 | 8,475 |
| 25 | Illiterate | 3,408 | 1,449 | 2,391 | 1,547 | 2,101 | 1,669 | 1,359 | 1,686 | 1,581 | 2,599 | 1,048 |
| 26 | Per cent of illiterate | 3.6 | 12.5 | 11.7 | 13.6 | 11.3 | 9.2 | 11.6 | 12.6 | 11.3 | 12.8 | 12.4 |
| 27 | Population 10 to 20 years of age | 47,860 | 6,775 | 11,893 | 4,617 | 7,232 | 7,944 | 5,355 | 6,682 | 9,886 | 8,689 | 3,222 |
| 28 | Illiterate | 3,249 | 1,833 | 2,004 | 409 | 601 | 798 | 589 | 1,019 | 1,839 | 906 | 259 |
| 29 | Per cent of illiterate | 6.8 | 27.1 | 16.9 | 8.9 | 8.3 | 10.0 | 11.0 | 15.2 | 18.6 | 10.4 | 8.0 |
| 30 | Population 6 to 20 years of age | 66,898 | 9,670 | 16,595 | 6,727 | 10,544 | 11,277 | 7,652 | 9,616 | 14,150 | 12,661 | 4,729 |
| 31 | School enrollment (public) | 42,392 | 4,319 | 8,439 | 4,125 | 7,552 | 7,175 | 4,107 | 5,666 | 9,057 | 7,634 | 3,499 |
| 32 | Number enrolled from each 100 of 6 to 20 years of age | 63.5 | 44.6 | 51.1 | 61.3 | 71.9 | 62.7 | 55.1 | 58.9 | 64.0 | 60.2 | 73.9 |
| 33 | White enrollment | 28,993 | 4,094 | 5,393 | 4,065 | 7,498 | 5,602 | 3,945 | 4,413 | 4,340 | 6,724 | 3,499 |
| 34 | Colored enrollment | 13,399 | 225 | 3,046 | 90 | 84 | 1,573 | 162 | 253 | 4,717 | 910 | ... |
| 35 | Number of private schools | 7 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 3 | 2 | 0 |
| 36 | Private school enrollment, elementary and high schools | 1,102 | 399 | 165 | ... | 425 | ... | ... | ... | 740 | 85 | ... |
| 37 | Public and private school enrollment | 43,494 | 4,718 | 8,604 | ... | 8,007 | ... | ... | ... | 9,797 | 7,719 | ... |
| 38 | Per cent enrolled in private schools | 2.5 | 8.4 | 1.9 | ... | 5.3 | ... | ... | ... | 7.5 | 1.1 | ... |

| | PUBLIC SCHOOLS. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 39 | Average attendance | 29,077 | 2,352 | 4,863 | 2,481 | 4,798 | 3,972 | 3,054 | 3,586 | 4,866 | 4,860 | 1,949 |
| 40 | White | 20,970 | 2,202 | 3,096 | 2,426 | 4,735 | 3,152 | 2,956 | 2,825 | 2,508 | 4,283 | 1,949 |
| 41 | Colored | 8,107 | 150 | 1,767 | 55 | 63 | 1,573 | 162 | 1,253 | 4,717 | 910 | ........ |
| 42 | Number attending daily in each 100 enrolled | 68.5 | 54.4 | 57.6 | 60.1 | 63.2 | 55.3 | 74.3 | 63.2 | 53.7 | 63.6 | 55.6 |
| 43 | White | 72 | 53 | 57 | 59 | 63 | 56 | 74 | 64 | 57 | 63 | 55 |
| 44 | Colored | 60 | 66 | 58 | 61 | 75 | 52 | 60 | 52 | 49 | 63 | ........ |
| 45 | Number attending daily in each 100 of 6 to 20 years of age | 43.4 | 23.2 | 29.2 | 36.7 | 45.5 | 35.2 | 39.9 | 37.2 | 34.3 | 38.3 | 41.2 |
| 46 | Length of session, in days | 147 | 111 | 127 | 87 | 113 | 122 | 108 | 108 | 123 | 95 | 90 |
| 47 | Number of days each child enrolled attended | 90.6 | 63.6 | 73.1 | 52.2 | 71.4 | 67.4 | 80.2 | 68.2 | 66.0 | 60.4 | 50.0 |
| 48 | Number of days each child 6 to 20 years of age attended | 63.7 | 24.7 | 37.0 | 31.9 | 50.2 | 42.9 | 43.0 | 40.1 | 42.1 | 36.3 | 37.0 |
| 49 | Number of teachers | 977 | 78 | 170 | 104 | 130 | 153 | 104 | 124 | 150 | 184 | 82 |
| 50 | Enrollment per teacher | 43 | 55 | 49 | 39 | 57 | 46 | 39 | 45 | 60 | 41 | 42 |
| 51 | Teachers' salaries | $450,815 | $23,686 | $57,913 | $22,239 | $32,980 | $49,163 | $28,085 | $36,003 | $46,642 | $44,973 | $19,477 |
| 52 | Average annual salary | $461 | $303 | $340 | $213 | $252 | $321 | $270 | $290 | $310 | $244 | $237 |
| 53 | Teachers with normal or college training [1] | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| 54 | Per cent of teachers with normal or college training [1] | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| 55 | Teachers holding third-grade or temporary certificates | 208 | 32 | 42 | 33 | 40 | 47 | 40 | 47 | 74 | 51 | 32 |
| 56 | Per cent of teachers holding third-grade or temporary certificates | 21 | 41 | 24 | 32 | 30 | 30 | 38 | 37 | 49 | 27 | 39 |
| 57 | Total school expenditures | $724,610 | $26,234 | $68,586 | $29,599 | $40,644 | $50,561 | $33,036 | $39,548 | $57,191 | $54,690 | $26,584 |
| 58 | Amount received from State | $190,160 | $23,664 | $39,800 | $18,078 | $30,242 | $30,336 | $20,079 | $24,919 | $34,792 | $31,747 | $16,421 |
| 59 | Per cent received from State | 26 | 90 | 58 | 61 | 74 | 59 | 60 | 63 | 60 | 58 | 61 |
| 60 | Expenditure per child enrolled | $17.11 | $6.07 | $8.12 | $7.17 | $5.36 | $7.04 | $8.04 | $6.98 | $6.31 | $7.16 | $7.59 |
| 61 | Expenditure per child enrolled 6 to 20 years of age | $10.83 | $2.71 | $4.13 | $4.40 | $3.85 | $4.41 | $4.43 | $4.11 | $4.04 | $4.31 | $5.60 |
| 62 | Per cent of expenditures used for teachers' salaries | 62.2 | 90.2 | 84.4 | 75.1 | 81.1 | 97.2 | 85.0 | 91.0 | 81.5 | 82.2 | 73.2 |
| 63 | Tuition per child enrolled | $10.64 | $5.47 | $6.85 | $5.38 | $4.34 | $6.84 | $6.83 | $6.35 | $5.14 | $5.88 | $55.55 |
| 64 | Tuition per child enrolled 6 to 20 years of age | $6.73 | $2.44 | $3.48 | $3.30 | $3.08 | $4.28 | $3.76 | $3.74 | $3.29 | $3.54 | $4.09 |
| 65 | Value of school buildings | $1,866,685 | $45,350 | $98,705 | $27,945 | $51,910 | $193,630 | $51,995 | $40,490 | $83,140 | $79,815 | $46,975 |
| 66 | Average value of school building | $8,805 | $676 | $1,007 | $399 | $596 | $2,200 | $702 | $458 | $875 | $806 | $1,092 |
| 67 | Number of school libraries | 71 | 5 | 16 | 4 | 12 | 11 | 1 | 7 | 16 | 6 | 3 |
| 68 | Number of volumes in libraries | 35,443 | 300 | 2,533 | 240 | 1,300 | 1,250 | 128 | 769 | 1,253 | 718 | 535 |
| 69 | Average number of volumes | 499 | 60 | 158 | 60 | 108 | 112 | 128 | 109 | 78 | 119 | 178 |
| 70 | Circulating libraries used [1] | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| 71 | Enrolled in high school | 2,670 | 219 | 435 | 97 | 227 | 281 | 164 | 306 | 212 | 279 | 184 |
| 72 | Enrolled in high school in every 100 of population 6 to 20 years of age | 3.99 | 2.26 | 2.62 | 1.44 | 2.15 | 2.49 | 2.14 | 3.18 | 1.49 | 2.20 | 3.89 |

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[1] No data.

## *School statistics of Georgia.*

[The mountain counties are in *italic*.]

| | | Entire State. | Bartow County. | *Catoosa* County. | *Chattooga* County. | *Cherokee* County. | *Dade* County. | *Dawson* County. | *Fannin* County. | Floyd County. | Forsyth County. | *Gilmer* County. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Population: | | | | | | | | | | | |
| 1 | Total | 2,609,121 | 25,388 | 7,184 | 13,608 | 16,661 | 4,139 | 4,686 | 12,574 | 36,736 | 11,940 | 9,237 |
| 2 | White | 1,431,802 | 19,039 | 6,708 | 11,154 | 15,493 | 3,848 | 4,534 | 12,412 | 26,248 | 10,842 | 9,166 |
| 3 | Colored | 1,176,787 | 6,348 | 476 | 2,454 | 1,168 | 291 | 152 | 162 | 10,482 | 1,098 | 71 |
| 4 | Per cent colored | 46.7 | 29.7 | 6.6 | 18.0 | 7.0 | 7.0 | 3.2 | 1.3 | 28.5 | 9.2 | 0.8 |
| 5 | Foreign white | 15,072 | 53 | 149 | 15 | 18 | 7 | .......... | 5 | 162 | 2 | 6 |
| 6 | Per cent foreign white | 0.6 | 0.2 | 2.1 | 0.1 | 0.1 | 0.2 | .......... | .......... | 0.4 | .......... | 0.1 |
| 7 | Native white of native parentage | 1,391,058 | 18,863 | 6,181 | 11,113 | 15,405 | 3,811 | 4,525 | 12,373 | 25,762 | 10,821 | 9,137 |
| 8 | Per cent native white of native parentage | 53.3 | 74.3 | 86.0 | 81.7 | 92.5 | 92.1 | 96.6 | 98.4 | 70.1 | 90.6 | 98.9 |
| 9 | Urban | 538,650 | 4,067 | .......... | .......... | .......... | .......... | .......... | .......... | 12,099 | .......... | .......... |
| 10 | Rural | 2,070,650 | 21,321 | 7,184 | 13,608 | 16,661 | 4,139 | 4,686 | 12,574 | 24,637 | 11,940 | 9,237 |
| 11 | Of largest city or village | 154,839 | 4,067 | 398 | 657 | 2,002 | 302 | 179 | 1,253 | 12,099 | 305 | 659 |
| 12 | Rural, per square mile | 35.3 | 45.3 | 42.5 | 41.5 | 38.8 | 22.3 | 21.7 | 31.4 | 49.1 | 48.3 | 21.0 |
| 13 | Area, square miles | 58,725 | 471 | 169 | 328 | 429 | 186 | 216 | 401 | 502 | 247 | 440 |
| 14 | Average area, square miles, to white school | 11.9 | 10.2 | 6.5 | 9.6 | 7.6 | 9.7 | 8.3 | 7.7 | 9.4 | 4.7 | 9.3 |
| 15 | Number of white schools | 4,933 | 46 | 26 | 34 | 56 | 19 | 26 | 52 | 53 | 52 | 47 |
| 16 | Schools necessary to provide one for each 12 square miles. | 4,894 | 40 | 15 | 28 | 36 | 16 | 18 | 34 | 42 | 21 | 37 |
| 17 | Population 6 to 20 years of age, per school | 116 | 144 | 74 | 107 | 99 | 70 | 62 | 88 | 162 | 74 | 67 |
| 18 | Population, 6 to 20 years of age, for each 12 square miles. | 194 | 231 | 148 | 176 | 166 | 92 | 93 | 135 | 301 | 206 | 87 |
| 19 | Number of one-teacher schools [1] | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 20 | Per cent of one-teacher schools | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 21 | Population, 10 years of age and over | 1,885,111 | 18,106 | 5,400 | 9,675 | 11,733 | 2,917 | 3,409 | 8,617 | 26,924 | 8,248 | 6,331 |
| 22 | Illiterate | 389,775 | 3,521 | 411 | 1,396 | 1,464 | 422 | 496 | 1,857 | 3,911 | 1,386 | 1,071 |
| 23 | Per cent of illiterate | 20.7 | 19.4 | 7.6 | 14.4 | 12.5 | 14.5 | 14.5 | 21.6 | 14.5 | 16.8 | 16.9 |
| 24 | Native white, 10 years of age and over | 1,023,970 | 13,486 | 4,905 | 7,914 | 10,912 | 2,711 | 3,305 | 8,489 | 19,016 | 7,497 | 6,281 |
| 25 | Illiterate | 80,203 | 2,018 | 328 | 926 | 1,160 | 350 | 437 | 1,804 | 1,645 | 1,093 | 1,060 |
| 26 | Per cent of illiterate | 7.8 | 15.0 | 6.7 | 11.7 | 10.6 | 12.9 | 13.2 | 21.8 | 8.7 | 14.6 | 16.9 |
| 27 | Population 10 to 20 years of age | 651,346 | 6,533 | 1,629 | 3,450 | 4,203 | 1,036 | 1,202 | 3,149 | 9,010 | 2,990 | 2,208 |
| 28 | Illiterate | 91,901 | 1,018 | 97 | 376 | 311 | 91 | 93 | 457 | 1,034 | 264 | 218 |
| 29 | Per cent of illiterate | 14.1 | 15.6 | 6.0 | 10.9 | 7.4 | 8.8 | 7.7 | 14.5 | 11.5 | 8.8 | 9.9 |
| 30 | Population 6 to 20 years of age | 925,865 | 9,250 | 2,233 | 4,949 | 5,989 | 1,477 | 1,687 | 4,606 | 12,661 | 4,330 | 3,243 |
| 31 | School enrollment (public) | 565,071 | 6,025 | 1,452 | 3,046 | 5,190 | 1,035 | 1,357 | 2,810 | 6,900 | 3,463 | 2,663 |
| 32 | Number enrolled from each 100 of 6 to 20 years of age | 61.3 | 65.1 | 65.0 | 61.5 | 86.6 | 70.0 | 81.6 | 61.0 | 54.4 | 79.9 | 82.1 |
| 33 | White enrollment | 342,129 | 4,506 | 1,327 | 2,451 | 4,959 | 974 | 1,320 | 2,810 | 5,034 | 3,106 | 2,644 |
| 34 | Colored enrollment | 222,942 | 1,519 | 125 | 595 | 231 | 61 | 37 | .......... | 1,816 | 297 | 19 |
| 35 | Number of private schools [1] | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 36 | Private school enrollment [1] | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 37 | Public and private school enrollment [1] | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 38 | Per cent enrolled in private schools [1] | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |

| | PUBLIC SCHOOLS. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 39 | Average attendance | 352,059 | 2,966 | 828 | 1,862 | 3,307 | 631 | 857 | 1,576 | 4,670 | 2,025 | 1,348 |
| 40 | White | 221,381 | 2,253 | 745 | 1,487 | 3,162 | 593 | 832 | 1,576 | 3,520 | 1,872 | 1,335 |
| 41 | Colored | 130,678 | 713 | 83 | 375 | 145 | 38 | 24 | .......... | 1,150 | 153 | 13 |
| 42 | Number attending daily in each 100 enrolled | 62.1 | 49.2 | 57.1 | 61.2 | 63.7 | 60.9 | 63.1 | 56.0 | 67.6 | 58.4 | 50.6 |
| 43 | White | 64 | 50 | 56 | 60 | 63 | 60 | 62 | 56 | 69 | 59 | 50 |
| 44 | Colored | 58 | 46 | 66 | 63 | 62 | 62 | 64 | .......... | 63 | 51 | 68 |
| 45 | Number attending daily in each 100 of 6 to 20 years of age | 38.0 | 32.0 | 37.1 | 37.6 | 55.1 | 42.6 | 51.4 | 34.1 | 36.7 | 46.6 | 41.5 |
| 46 | Length of session in days | 140 | 109 | 104 | 107 | 99 | 113 | 97 | 100 | 143 | 99 | 84 |
| 47 | Number of days each child enrolled attended | 86.9 | 53.6 | 59.3 | 65.4 | 63.0 | 68.8 | 61.2 | 56.0 | 96.6 | 57.8 | 42.5 |
| 48 | Number of days each child 6 to 20 years of age attended | 53.2 | 34.8 | 38.5 | 40.2 | 54.5 | 48.1 | 49.8 | 34.1 | 52.4 | 46.1 | 34.8 |
| 49 | Number of teachers | 13,024 | 123 | 34 | 74 | 84 | 28 | 33 | 105 | 111 | 98 | 60 |
| 50 | Enrollment per teacher | 43 | 48 | 42 | 41 | 61 | 36 | 41 | 26 | 62 | 35 | 44 |
| 51 | Teachers' salaries | $3,367,856 | $30,994 | $4,967 | $16,364 | $16,432 | $3,698 | $5,149 | $12,397 | $48,558 | $12,432 | $8,480 |
| 52 | Average annual salary | $258 | $251 | $146 | $221 | $195 | $132 | $156 | $118 | $437 | $126 | $141 |
| 53 | Teachers with normal training | 4,139 | 86 | 5 | 26 | 21 | .......... | 5 | 17 | .......... | 1 | 10 |
| 54 | Per cent of teachers with normal training | 31.0 | 29.2 | 14.7 | 35.1 | 25.0 | .......... | 15.1 | 16.1 | .......... | 0.9 | 16.6 |
| 55 | Teachers holding third-grade or temporary certificates | 3,800 | 53 | 8 | 10 | 9 | 4 | 10 | 15 | 61 | 38 | 8 |
| 56 | Per cent of teachers holding third-grade or temporary certificates | 29.1 | 48.6 | 23.5 | 13.5 | 10.7 | 14.2 | 30.3 | 14.2 | 55.3 | 38.7 | 13.3 |
| 57 | Total school expenditures | $5,065,229 | $39,104 | $5,395 | $18,754 | $21,737 | $4,014 | $6,476 | $15,429 | [2] $54,888 | $14,325 | $9,257 |
| 58 | Amount received from the State | $2,320,913 | $22,482 | $5,400 | $13,382 | $16,565 | $3,862 | $6,391 | $13,841 | $29,780 | $10,608 | $9,153 |
| 59 | Per cent received from the State | 45 | 57 | 100 | 71 | 76 | 96 | 98 | 89 | 54 | 73 | 98 |
| 60 | Expenditures per child enrolled | $8.96 | $6.49 | $3.71 | $6.15 | $4.16 | $3.87 | $4.77 | $5.49 | $7.95 | $4.13 | $3.47 |
| 61 | Expenditures per child 6 to 20 years of age | $5.49 | $4.21 | $2.41 | $3.78 | $3.60 | $2.70 | $3.89 | $3.34 | $4.32 | $3.29 | $2.84 |
| 62 | Per cent of expenditures used for teachers' salaries | 66.4 | 79.2 | 92.0 | 87.2 | 75.5 | 91.2 | 80.7 | 80.3 | 88.4 | 86.7 | 91.6 |
| 63 | Tuition per child enrolled | $5.94 | $5.14 | $3.41 | $5.36 | $3.14 | $3.52 | $3.84 | $4.40 | $7.02 | $3.58 | $3.17 |
| 64 | Tuition per child 6 to 20 years of age | $3.64 | $3.33 | $2.21 | $3.29 | $2.71 | $2.47 | $3.13 | $2.68 | $3.81 | $2.85 | $2.60 |
| 65 | Value of school buildings | $10,263,044 | $87,950 | $12,200 | $50,250 | $41,500 | $6,650 | $6,400 | $43,200 | $198,900 | $12,425 | $17,375 |
| 66 | Average value of school building | $1,505 | $1,332 | $488 | $1,116 | $902 | $363 | $266 | $800 | $2,286 | $270 | $361 |
| 67 | Number of school libraries | 1,176 | 24 | 2 | 3 | 10 | 3 | 14 | 25 | 14 | 3 | 7 |
| 68 | Number of volumes in libraries | 212,845 | 2,571 | 650 | 541 | 3,000 | 300 | 450 | 2,345 | 750 | 400 | 800 |
| 69 | Average number of volumes | 180 | 107 | 325 | 180 | 300 | 100 | 32 | 93 | 53 | 133 | 114 |
| 70 | Circulating libraries used [1] | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 71 | Enrolled in high school | 23,352 | 92 | 10 | 84 | 117 | 6 | .......... | 6 | 102 | 38 | .......... |
| 72 | Enrolled in high school from every 100 of population 6 to 20 years of age | 2.52 | 0.99 | 0.44 | 1.69 | 1.95 | 0.40 | .......... | 0.13 | 0.80 | 0.87 | .......... |

[1] No data.

[2] Exclusive of $100,000 for a new building.

*School statistics of Georgia*—Continued.

[The mountain counties are in *italic*.]

| | | Gordon County. | *Habersham County.* | *Lumpkin County.* | *Murray County.* | *Pickens County.* | *Rabun County.* | *Towns County.* | *Union County.* | *Walker County.* | *White County.* | Whitfield County. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Population: | | | | | | | | | | | |
| 1 | Total | 15,861 | 10,134 | 5,444 | 9,763 | 9,041 | 5,562 | 3,932 | 6,918 | 18,692 | 5,110 | 15,934 |
| 2 | White | 14,505 | 9,432 | 5,124 | 9,361 | 8,601 | 5,400 | 3,917 | 1,854 | 16,241 | 4,713 | 14,214 |
| 3 | Colored | 1,356 | 711 | 320 | 402 | 440 | 156 | 15 | 64 | 2,451 | 397 | 1,719 |
| 4 | Per cent colored | 8.5 | 7.0 | 5.9 | 4.1 | 4.9 | 2.8 | 0.4 | 0.9 | 13.1 | 7.8 | 10.8 |
| 5 | Foreign white | 16 | 55 | 7 | 5 | 19 | 6 | ........ | 2 | 60 | 8 | 30 |
| 6 | Per cent foreign white | 0.1 | 0.5 | 0.1 | 0.1 | 0.2 | 0.1 | ........ | ........ | 0.3 | 0.2 | 0.2 |
| 7 | Native white of native parentage | 14,464 | 9,238 | 5,103 | 9,331 | 8,535 | 5,377 | 3,910 | 6,842 | 16,079 | 4,669 | 14,084 |
| 8 | Per cent native white of native parentage | 91.2 | 91.2 | 93.7 | 95.6 | 94.4 | 96.7 | 99.4 | 98.9 | 86.0 | 91.4 | 88.4 |
| 9 | Urban | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 5,324 |
| 10 | Rural | 15,861 | 10,134 | 5,444 | 9,763 | 9,041 | 5,562 | 3,932 | 6,918 | 18,692 | 5,110 | 10,610 |
| 11 | Of largest city or village | 1,652 | 760 | 829 | 314 | 550 | 541 | 283 | 203 | 1,590 | ........ | 5,324 |
| 12 | Rural, per square mile | 42.3 | 34.9 | 19.4 | 28.5 | 39.1 | 14.8 | 21.7 | 21.4 | 43.3 | 20.9 | 37.5 |
| 13 | Area, square miles | 375 | 290 | 280 | 342 | 231 | 377 | 181 | 324 | 432 | 245 | 283 |
| 14 | Average area, square miles, to white school | 7.5 | 7.2 | 9.7 | 9.7 | 6.8 | 11.7 | 8.6 | 7.3 | 8.4 | 10.2 | 6.9 |
| 15 | Number of white schools | 50 | 40 | 29 | 35 | 34 | 32 | 21 | 44 | 51 | 24 | 41 |
| 16 | Schools necessary to provide one for each 12 square miles | 32 | 25 | 24 | 29 | 20 | 32 | 16 | 27 | 36 | 21 | 24 |
| 17 | Population, 6 to 20 years of age, per school | 99 | 81 | 57 | 92 | 87 | 56 | 70 | 57 | 100 | 68 | 115 |
| 18 | Population, 6 to 20 years of age, for each 12 square miles | 174 | 142 | 76 | 120 | 158 | 60 | 92 | 96 | 178 | 88 | 235 |
| 19 | Number of one-teacher schools [1] | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| 20 | Per cent of one-teacher schools | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| 21 | Population 10 years of age and over | 11,242 | 7,050 | 3,886 | 6,697 | 6,214 | 3,885 | 2,740 | 4,808 | 13,446 | 3,562 | 11,472 |
| 22 | Illiterate | 1,335 | 978 | 840 | 1,031 | 1,094 | 564 | 436 | 721 | 1,427 | 541 | 1,445 |
| 23 | Per cent of illiterate | 11.9 | 13.9 | 21.6 | 15.4 | 17.6 | 14.5 | 15.9 | 15.0 | 10.6 | 15.2 | 12.6 |
| 24 | Native white 10 years of age and over | 10,231 | 6,474 | 3,656 | 6,408 | 5,877 | 3,763 | 2,729 | 4,756 | 11,600 | 3,292 | 10,216 |
| 25 | Illiterate | 989 | 841 | 769 | 946 | 1,016 | 537 | 430 | 712 | 1,021 | 475 | 1,128 |
| 26 | Per cent of illiterate | 9.7 | 13.0 | 21.0 | 14.8 | 17.3 | 14.3 | 15.8 | 15.0 | 8.8 | 14.4 | 11.0 |
| 27 | Population 10 to 20 years of age | 3,927 | 2,417 | 1,259 | 2,374 | 2,157 | 1,328 | 1,042 | 1,775 | 4,584 | 1,272 | 4,010 |
| 28 | Illiterate | 302 | 189 | 136 | 267 | 204 | 100 | 90 | 129 | 312 | 91 | 420 |
| 29 | Per cent of illiterate | 7.7 | 7.8 | 10.8 | 11.2 | 9.5 | 7.5 | 8.6 | 7.3 | 6.8 | 7.2 | 10.5 |
| 30 | Population 6 to 20 yers of age | 5,587 | 3,565 | 1,832 | 3,506 | 3,164 | 1,927 | 1,487 | 2,594 | 6,442 | 1,855 | 5,648 |
| 31 | School enrollment (public) | 3,920 | 2,330 | 1,301 | 2,504 | 2,369 | 1,438 | 1,120 | 2,414 | 4,989 | 1,455 | 4,019 |
| 32 | Number enrolled from each 100 of 6 to 20 years of age | 70.1 | 65.3 | 71.0 | 71.4 | 74.7 | 74.6 | 75.2 | 93.0 | 77.4 | 78.4 | 71.0 |
| 33 | White enrollment | 3,629 | 2,219 | 1,187 | 2,398 | 2,267 | 1,399 | 1,120 | 2,401 | 4,397 | 1,334 | 3,526 |
| 34 | Colored enrollment | 291 | 111 | 114 | 106 | 102 | 39 | ........ | 13 | 592 | 121 | 493 |
| 35 | Number of private schools [1] | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| 36 | Private school enrollment [1] | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| 37 | Public and private school enrollment [1] | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |
| 38 | Per cent enrolled in private schools [1] | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |

| | PUBLIC SCHOOLS. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 39 | Average attendance | 2,229 | 1,168 | 776 | 1,415 | 1,364 | 886 | 626 | 1,306 | 2,925 | 845 | 2,567 |
| 40 | White | 2,036 | 1,094 | 706 | 1,353 | 1,301 | 860 | 626 | 1,297 | 2,551 | 785 | 2,178 |
| 41 | Colored | 193 | 74 | 70 | 62 | 63 | 26 | .......... | 9 | 376 | 60 | 389 |
| 42 | Number attending daily in each 100 enrolled | 56.8 | 50.1 | 59.6 | 56.5 | 57.6 | 61.6 | 55.8 | 54.1 | 58.6 | 58.1 | 63.8 |
| 43 | White | 56 | 48 | 58 | 56 | 57 | 61 | 55 | 54 | 58 | 58 | 61 |
| 44 | Colored | 66 | 66 | 61 | 58 | 61 | 66 | .......... | 69 | 63 | 49 | 78 |
| 45 | Number attending daily in each 100 of 6 to 20 years of age | 39.8 | 32.7 | 42.3 | 40.3 | 43.0 | 45.9 | 41.9 | 50.3 | 45.3 | 45.5 | 45.2 |
| 46 | Length of session in days | 94 | 100 | 88 | 109 | 116 | 100 | 100 | 100 | 134 | 109 | 108 |
| 47 | Number of days each child enrolled attended | 53.3 | 50.1 | 52.4 | 61.5 | 66.8 | 61.6 | 55.8 | 54.1 | 78.5 | 63.3 | 68.9 |
| 48 | Number of days each child 6 to 20 years of age attended | 37.4 | 32.7 | 37.2 | 43.9 | 49.8 | 45.9 | 41.9 | 50.3 | 60.7 | 49.5 | 48.8 |
| 49 | Number of teachers | 90 | 59 | 53 | 54 | 48 | 42 | 32 | 60 | 102 | 38 | 86 |
| 50 | Enrollment per teacher | 43 | 39 | 24 | 46 | 49 | 34 | 35 | 40 | 48 | 38 | 46 |
| 51 | Teachers' salaries | $15,239 | $8,735 | $5,477 | $12,116 | $10,937 | $5,767 | $3,370 | $6,870 | $21,317 | $5,375 | $23,610 |
| 52 | Average annual salary | $169 | $148 | $103 | $224 | $227 | $137 | $105 | $114 | $208 | $141 | $274 |
| 53 | Teachers with normal training | 9 | 25 | 26 | 6 | 13 | 4 | 5 | .......... | .......... | .......... | 5 |
| 54 | Per cent of teachers with normal training | 10.0 | 42.3 | 49.0 | 11.1 | 27.1 | 9.5 | 15.6 | .......... | .......... | .......... | 5.8 |
| 55 | Teachers holding third-grade or temporary certificates | 55 | 16 | 25 | 9 | 13 | 22 | .......... | 13 | 6 | 8 | 14 |
| 56 | Per cent of teachers holding third-grade or temporary certificates | 61.1 | 27.1 | 47.1 | 16.6 | 27.0 | 52.3 | .......... | 21.6 | 5.8 | 21.0 | 16.3 |
| 57 | Total school expenditures | $16,650 | $9,559 | $6,265 | $13,598 | $12,970 | $6,325 | $3,821 | $7,297 | $26,007 | $5,834 | $53,012 |
| 58 | Amount received from the State | $11,715 | $9,522 | $4,435 | $9,904 | $8,961 | $5,992 | $3,821 | $7,321 | $20,637 | $5,273 | $14,676 |
| 59 | Per cent received from the State | 70 | 99 | 70 | 72 | 67 | 94 | 100 | 100 | 79 | 90 | 27 |
| 60 | Expenditures per child enrolled | $4.24 | $4.10 | $4.81 | $5.43 | $5.47 | $4.39 | $3.41 | $3.02 | $5.21 | $4.01 | $13.19 |
| 61 | Expenditures per child 6 to 20 years of age | $2.97 | $2.67 | $3.41 | $3.87 | $4.08 | $3.27 | $2.56 | $2.80 | $4.03 | $3.14 | $9.36 |
| 62 | Per cent of expenditures used for teachers' salaries | 91.4 | 91.7 | 87.4 | 88.3 | 84.3 | 91.1 | 88.1 | 94.1 | 81.9 | 92.1 | 44.5 |
| 63 | Tuition per child enrolled | $3.87 | $3.75 | $4.20 | $4.79 | $4.61 | $3.99 | $3.00 | $2.85 | $4.26 | $3.69 | $5.8 |
| 64 | Tuition per child 6 to 20 years of age | $2.71 | $2.44 | $2.98 | $3.41 | $3.43 | $2.97 | $2.25 | $2.63 | $2.48 | $2.89 | $4.16 |
| 65 | Value of school buildings | $33,340 | $16,100 | $11,700 | $24,000 | $20,290 | $22,700 | $10,700 | $9,100 | $66,950 | $9,200 | $71,950 |
| 66 | Average value of school building | $577 | $402 | $344 | $705 | $614 | $667 | $509 | $202 | $892 | $353 | $1,439 |
| 67 | Number of school libraries | 7 | 2 | 14 | 4 | 9 | 5 | 2 | .......... | 30 | 4 | 13 |
| 68 | Number of volumes in libraries | 896 | 6,400 | 742 | 100 | 574 | 310 | 7,200 | .......... | 2,000 | 244 | 2,027 |
| 69 | Average number of volumes | 128 | 3,200 | 53 | 25 | 63 | 62 | 3,600 | .......... | 66 | 61 | 155 |
| 70 | Circulating libraries used[1] | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 71 | Enrolled in high school | 49 | .......... | .......... | 28 | 14 | .......... | 167 | 20 | 44 | 21 | 41 |
| 72 | Enrolled in high school from every 100 of population 6 to 20 years of age | 0.87 | .......... | .......... | 0.79 | 0.44 | .......... | 11.23 | 0.77 | 0.68 | 1.13 | 0.72 |

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[1] No data.

### *School statistics of Kentucky.*

[The mountain counties are in *italic*.]

| | | Entire State. | Bell County. | Boyd County. | *Breathitt* County. | *Carter* County. | *Clay* County. | Elliott County. | *Estill* County. | *Floyd* County. | Greenup County. | *Harlan* County. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Population: | | | | | | | | | | | |
| 1 | Total | 2,289,905 | 28,447 | 23,444 | 17,540 | 21,966 | 17,789 | 9,814 | 12,273 | 18,623 | 18,475 | 10,566 |
| 2 | White | 2,027,951 | 25,527 | 22,609 | 17,279 | 21,856 | 17,295 | 9,809 | 12,167 | 18,478 | 18,208 | 10,002 |
| 3 | Colored | 261,656 | 2,920 | 822 | 260 | 110 | 494 | 1 | 106 | 99 | 257 | 564 |
| 4 | Per cent colored | 11.4 | 10.3 | 3.5 | 1.5 | 0.5 | 2.8 | .......... | 0.9 | 0.5 | 1.4 | 8.0 |
| 5 | Foreign white | 40,053 | 415 | 359 | 20 | 45 | 4 | 1 | 3 | 8 | 58 | 12 |
| 6 | Per cent foreign white | 1.7 | 1.5 | 1.5 | 0.1 | 0.2 | .......... | .......... | .......... | .......... | 0.3 | 0.1 |
| 7 | Native white of native parentage | 1,863,194 | 24,649 | 20,969 | 17,234 | 21,657 | 17,279 | 9,801 | 12,151 | 18,463 | 17,824 | 9,977 |
| 8 | Per cent of native white of native parentage | 81.4 | 86.6 | 89.4 | 98.3 | 98.6 | 97.1 | 99.9 | 99.0 | 99.1 | 96.5 | 94.4 |
| 9 | Urban | 555,442 | 7,305 | 12,208 | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 10 | Rural | 1,734,463 | 21,142 | 11,236 | 17,540 | 21,906 | 17,789 | 9,814 | 12,273 | 18,623 | 18,475 | 10,566 |
| 11 | Of largest city or village | 223,928 | 7,305 | 8,688 | 1,346 | 1,132 | 626 | 160 | 272 | 1,120 | 1,038 | 657 |
| 12 | Rural per square mile | 43.2 | 55.1 | 70.7 | 36.3 | 53.2 | 37.2 | 37.3 | 48.3 | 46.7 | 53.4 | 22.1 |
| 13 | Area, square miles | 40,181 | 384 | 159 | 483 | 413 | 478 | 263 | 254 | 399 | 346 | 478 |
| 14 | Average area (square miles) tributary to each white school | 5.9 | 6.0 | 4.8 | 5.4 | 4.3 | 5.1 | 4.7 | 4.0 | 4.0 | 4.7 | 8.7 |
| 15 | Number of white schools | 6,957 | 64 | 33 | 90 | 95 | 93 | 56 | 65 | 99 | 73 | 55 |
| 16 | Schools necessary to provide one for each 12 square miles. | 3,515 | 29 | 14 | 41 | 35 | 40 | 22 | 22 | 34 | 29 | 40 |
| 17 | Population 6 to 20 years of age per school | 94 | 156 | 196 | 74 | 84 | 74 | 70 | 62 | 72 | 98 | 67 |
| 18 | Population 6 to 20 years of age for each 12 square miles | 215 | 344 | 547 | 166 | 232 | 177 | 176 | 212 | 214 | 230 | 99 |
| 19 | Number of one-teacher schools | 7,294 | 55 | 34 | 87 | 88 | 90 | 54 | 64 | 98 | 67 | 57 |
| 20 | Per cent of one-teacher schools | 92.0 | 85.9 | 87.1 | 94.4 | 91.6 | 94.7 | 98.1 | 100 | 98.0 | 98.6 | 96.6 |
| 21 | Population 10 years of age and over | 1,722,644 | 19,870 | 17,468 | 11,636 | 15,128 | 11,594 | 6,509 | 8,375 | 12,338 | 12,956 | 6,966 |
| 22 | Illiterate | 208,048 | 4,148 | 1,573 | 2,807 | 2,731 | 2,860 | 1,207 | 1,704 | 3,146 | 1,952 | 2,182 |
| 23 | Per cent of illiterate | 12.1 | 20.9 | 9.0 | 24.1 | 18.1 | 24.7 | 18.5 | 20.3 | 25.5 | 15.1 | 31.3 |
| 24 | Native white 10 years of age and over | 1,472,827 | 17,152 | 16,418 | 11,411 | 14,996 | 11,258 | 6,503 | 8,286 | 12,232 | 12,677 | 6,447 |
| 25 | Illiterate | 146,797 | 3,486 | 1,425 | 2,727 | 2,702 | 2,760 | 1,202 | 1,674 | 3,108 | 1,872 | 1,908 |
| 26 | Per cent of illiterate | 10.0 | 20.3 | 8.7 | 23.9 | 18.0 | 24.5 | 18.5 | 20.2 | 25.4 | 14.8 | 29.6 |
| 27 | Population 10 to 20 years of age | 539,434 | 6,900 | 5,479 | 4,672 | 5,670 | 4,823 | 2,656 | 3,266 | 4,956 | 4,622 | 2,677 |
| 28 | Illiterate | 36,156 | 994 | 242 | 660 | 691 | 587 | 277 | 376 | 877 | 419 | 481 |
| 29 | Per cent of illiterate | 6.7 | 14.4 | 4.4 | 14.1 | 12.2 | 12.2 | 10.4 | 11.5 | 17.7 | 9.1 | 18.0 |
| 30 | Population 6 to 20 years of age | 755,709 | 9,990 | 7,661 | 6,834 | 8,122 | 7,100 | 3,884 | 4,671 | 7,287 | 6,683 | 3,999 |
| 31 | School enrollment (public) | 495,863 | 6,266 | 5,068 | 5,730 | 5,494 | 5,798 | 3,141 | 2,899 | 5,564 | 4,681 | 3,456 |
| 32 | Number enrolled from each 100 of population 6 to 20 | 65.6 | 62.7 | 66.1 | 83.8 | 67.6 | 81.5 | 80.8 | 62.0 | 76.3 | 70.2 | 86.4 |
| 33 | White enrollment | 441,511 | 5,775 | 4,901 | 5,670 | 5,482 | 5,674 | 3,141 | 2,887 | 5,553 | 4,580 | 3,342 |
| 34 | Colored enrollment | 54,352 | 491 | 167 | 60 | 12 | 124 | .......... | 12 | 11 | 101 | 122 |
| 35 | Number of private schools | 197 | .......... | 2 | 4 | .......... | 4 | .......... | 1 | 1 | .......... | .......... |
| 36 | Private-school enrollment, 20 years of age or under | 15,989 | .......... | 130 | 422 | .......... | 425 | .......... | 10 | 225 | .......... | .......... |
| 37 | Public and private school enrollment | 511,852 | .......... | 5,198 | 6,152 | .......... | 6,223 | .......... | 2,909 | 5,789 | .......... | .......... |
| 38 | Per cent of enrollment in private schools | 3.1 | .......... | 2.5 | 6.8 | .......... | 6.8 | .......... | 0.3 | 3.8 | .......... | .......... |

| | PUBLIC SCHOOLS. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 39 | Average attendance | 273,560 | 4,205 | 3,300 | 3,502 | 2,901 | .......... | 1,603 | 1,691 | .......... | 2,729 | .......... |
| 40 | White | 245,777 | 3,915 | 3,181 | 3,469 | 2,890 | .......... | 1,603 | 1,661 | .......... | 2,690 | .......... |
| 41 | Colored | 27,783 | 290 | 119 | 33 | 11 | .......... | .......... | 10 | .......... | 39 | .......... |
| 42 | Number attending daily in each 100 enrolled | 55.1 | 67.1 | 65.1 | 61.1 | 52.8 | .......... | 51.0 | 57.6 | .......... | 58.3 | .......... |
| 43 | White | 55 | 67 | 64.9 | 61 | 52 | .......... | 51 | 57 | .......... | 58 | .......... |
| 44 | Colored | 51 | 59 | 71.2 | 55 | 91 | .......... | .......... | 83 | .......... | 38 | .......... |
| 45 | Number attending daily in each 100 of population 6 to 20 | 36.1 | 42.0 | 43.0 | 51.2 | 35.6 | .......... | 41.2 | 35.7 | .......... | 40.9 | .......... |
| 46 | Length of session, in days | .......... | .......... | 141 | 103 | 122 | 117 | 110 | 130 | 105 | 143 | 114 |
| 47 | Number of days each child enrolled attended | .......... | .......... | 91.7 | 62.9 | 64.4 | .......... | 56.1 | 74.8 | .......... | 83.3 | .......... |
| 48 | Number of days each child 6 to 20 years of age attended | .......... | .......... | 60.6 | 52.7 | 43.4 | .......... | 45.3 | 46.4 | .......... | 58.4 | .......... |
| 49 | Number of teachers | 11,160 | 114 | 122 | 96 | 115 | 102 | 61 | 68 | 114 | 88 | 64 |
| 50 | Enrollment per teacher | 44 | 54 | 41 | 59 | 47 | 56 | 51 | 42 | 48 | 53 | 54 |
| 51 | Teachers' salaries | $3,425,139 | $37,062 | $45,771 | $26,932 | $32,210 | $27,658 | $15,558 | $18,340 | $28,939 | $28,862 | $16,529 |
| 52 | Average annual salary | $306.91 | $325 | $375 | $280 | $280 | $271 | $258 | $269 | $253 | $327 | $258 |
| 53 | Teachers with normal training[1] | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 54 | Per cent of teachers with normal school training[1] | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 55 | Teachers holding third-grade certificates | 608 | 5 | 2 | | 5 | 10 | 1 | 0 | 15 | 2 | 7 |
| 56 | Per cent of teachers holding third-grade certificates | 5.4 | 4.3 | 1.6 | 7.2 | 4.3 | 9.8 | 1.6 | 0 | 13.1 | 2.2 | 10.9 |
| 57 | Total school expenditures | $5,543,390 | $46,013 | $108,292 | $31,969 | $39,330 | $36,163 | $18,199 | $24,118 | $33,975 | $34,808 | $22,497 |
| 58 | Amount received from the State | $2,450,786 | $24,176 | $28,535 | $10,670 | $31,912 | $28,209 | $15,313 | $18,515 | $29,318 | $25,691 | $15,979 |
| 59 | Per cent received from the State | 44 | 52 | 26 | 33 | 81 | 78 | 84 | 76 | 86 | 73 | 71 |
| 60 | Expenditure per child enrolled | $11.11 | $7.34 | $21.36 | $5.57 | $7.15 | $6.23 | $5.79 | $8.31 | $6.12 | $7.43 | $6.63 |
| 61 | Expenditure per child 6 to 20 years of age | $7.28 | $4.60 | $9.03 | $4.66 | $4.83 | $5.07 | $4.67 | $5.15 | $4.66 | $5.21 | $5.72 |
| 62 | Per cent of total expenditures used for teachers' salaries | 61.7 | 85.4 | 42.2 | 84.2 | 81.9 | 76.4 | 85.4 | 76.0 | 85.1 | 82.9 | 73.4 |
| 63 | Tuition per child enrolled | $6.84 | $6.26 | $9.01 | $4.68 | $5.85 | $4.75 | $4.94 | $6.31 | $5.20 | $6.15 | $4.86 |
| 64 | Tuition per child enrolled 6 to 20 years of age | $4.49 | $3.92 | $3.81 | $3.92 | $3.95 | $3.87 | $3.98 | $3.91 | $3.96 | $4.31 | $4.19 |
| 65 | Value of school buildings | $5,195,312 | $20,040 | $193,515 | $20,000 | $52,700 | $38,000 | $16,000 | $20,000 | $23,635 | $30,000 | $30,000 |
| 66 | Average value of school buildings | $658 | $334 | $4,206 | $263 | $560 | $400 | $285 | $307 | $236 | $400 | $526 |
| 67 | Number of school libraries | 1,715 | 10 | 5 | 0 | 16 | 10 | .......... | 0 | 0 | 22 | 0 |
| 68 | Number of volumes in libraries | 123,933 | 1,042 | 315 | 0 | 150 | 130 | 63 | 0 | 0 | 593 | 0 |
| 69 | Average number of volumes | 71 | 104 | 63 | 0 | 9 | 13 | .......... | 0 | 0 | 26 | 0 |
| 70 | Circulating libraries used[1] | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 71 | Enrollment in high school | 6,874 | 16 | 219 | 0 | 22 | 0 | 0 | 0 | 0 | 42 | 6 |
| 72 | Enrolled in high school from every 100 of population 6 to 20 years of age | 0.90 | 0.16 | 2.85 | .......... | 0.27 | .......... | .......... | .......... | .......... | 0.62 | 0.15 |

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[1] No data.

*School statistics of Kentucky*—Continued.

[The mountain counties are in *italic*.]

| | | *Jackson* County. | *Johnson* County. | *Knott* County. | Knox County. | Laurel County. | *Lawrence* County. | *Lee* County. | ***Leslie*** **County.** | *Letcher* County. | *Magoffin* County. | **Martin County.** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Population: | | | | | | | | | | | |
| 1 | Total | 10,734 | 17,482 | 10,791 | 22,116 | 19,872 | 20,067 | 9,531 | 8,976 | 10,623 | 13,654 | 7,291 |
| 2 | White | 10,712 | 17,435 | 10,632 | 21,050 | 19,210 | 19,904 | 9,297 | 8,844 | 10,606 | 13,508 | 7,287 |
| 3 | Colored | 22 | 47 | 157 | 1,059 | 657 | 163 | 243 | 132 | 17 | 54 | 4 |
| 4 | Per cent colored | 0.2 | 0.3 | 1.5 | 4.8 | 3.3 | 0.8 | 2.5 | 1.5 | 0.2 | 0.4 | 0.1 |
| 5 | Foreign white | 1 | 64 | 0 | 90 | 291 | 27 | 45 | 2 | 2 | 5 | 1 |
| 6 | Per cent foreign white | .......... | 0.4 | .......... | 0.4 | 1.5 | 0.1 | 0.5 | .......... | .......... | .......... | .......... |
| 7 | **Native white of native parentage** | 10,699 | 17,294 | 10,632 | 20,875 | 18,432 | 19,796 | 9,202 | 8,842 | 10,604 | 13,495 | 7,276 |
| 8 | **Per cent of native white of native parentage** | 99.7 | 98.9 | 98.5 | 94.4 | 92.8 | 98.6 | 96.5 | 98.5 | 99.8 | 98.8 | 99.8 |
| 9 | Urban | .......... | .......... | .......... | [1] 854 | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 10 | Rural | 10,734 | 17,482 | 10,791 | 21,262 | 19,872 | 20,067 | 9,531 | 8,976 | 10,623 | 13,654 | 7,291 |
| 11 | Of largest city or village | 146 | 942 | 370 | [1] 2,589 | 1,638 | 1,356 | 1,360 | 316 | 321 | 310 | 381 |
| 12 | Rural per square mile | 32.2 | 65.2 | 31.0 | 59.7 | 44.5 | 47.6 | 47.9 | 24.1 | 29.9 | 45.2 | 32.1 |
| 13 | Area, square miles | 333 | 268 | 348 | 356 | 447 | 422 | 199 | 373 | 355 | 302 | 227 |
| 14 | Average area (square miles) tributary to each white **school** | 4.8 | 3.2 | 6.0 | 4.2 | 4.9 | 4.3 | 4.6 | 6.9 | 5.5 | 3.7 | 6.4 |
| 15 | Number of white schools | 69 | 82 | 58 | 84 | 90 | 98 | 43 | 53 | 64 | 81 | 35 |
| 16 | Schools necessary to provide one for each 12 square **miles** | 28 | 23 | 29 | 30 | 38 | 36 | 17 | 32 | 30 | 26 | 19 |
| 17 | Population 6 to 20 years of age per school | 60 | 79 | 72 | 93 | 77 | 75 | 82 | 64 | 64 | 66 | 86 |
| 18 | Population 6 to 20 years of age for each 12 square **miles** | 149 | 285 | 148 | 178 | 200 | 209 | 212 | 111 | 141 | 205 | 155 |
| 19 | Number of one-teacher schools | 69 | 76 | 58 | 80 | 92 | 93 | 41 | 54 | 64 | 79 | 32 |
| 20 | Per cent of one-teacher schools | 100 | 92.6 | 98.3 | 89.9 | 96.8 | 97.0 | 93.1 | 98.1 | 96.9 | 98.7 | 94.1 |
| 21 | Population 10 years of age and over | 7,110 | 12,021 | 6,888 | 15,089 | 13,725 | 13,842 | 6,566 | 5,745 | 6,857 | 9,087 | 4,932 |
| 22 | Illiterate | 1,333 | 1,940 | 1,807 | 3,132 | 1,996 | 2,625 | 1,229 | 2,002 | 1,493 | 2,184 | 1,140 |
| 23 | Per cent of illiterate | 18.7 | 16.1 | 26.2 | 20.8 | 14.5 | 19.0 | 18.7 | 34.8 | 21.8 | 24.0 | 23.1 |
| 24 | Native white 10 years of age and over | 7,097 | 11,923 | 6,792 | 14,213 | 12,961 | 13,693 | 6,343 | 5,654 | 6,844 | 8,978 | 4,927 |
| 25 | Illiterate | 1,328 | 1,923 | 1,801 | 2,920 | 1,873 | 2,586 | 1,155 | 1,951 | 1,483 | 2,104 | 1,137 |
| 26 | Per cent of illiterate | 18.7 | 16.1 | 26.5 | 20.5 | 14.5 | 18.9 | 18.2 | 34.5 | 21.7 | 23.4 | 23.1 |
| 27 | Population 10 to 20 years of age | 2,839 | 4,577 | 2,896 | 5,708 | 5,077 | 5,272 | 2,523 | 2,393 | 2,856 | 3,662 | 2,061 |
| 28 | Illiterate | 242 | 348 | 386 | 659 | 312 | 582 | 259 | 506 | 244 | 528 | 305 |
| 29 | Per cent of illiterate | 8.5 | 7.6 | 13.3 | 11.5 | 6.1 | 11.0 | 10.3 | 21.1 | 8.5 | 14.4 | 14.8 |
| 30 | Population 6 to 20 years of age | 4,174 | 6,540 | 4,305 | 8,357 | 7,402 | 7,556 | 3,612 | 3,570 | 4,232 | 5,330 | 2,954 |
| 31 | School enrollment (public) | 3,406 | 5,156 | 4,075 | 6,254 | 6,223 | 6,042 | 2,815 | 2,692 | 3,553 | 4,154 | 1,867 |
| 32 | Number enrolled from each 100 of population 6 to **20** | 81.6 | 78.8 | 94.6 | 74.8 | 84.0 | 79.9 | 77.9 | 75.4 | 83.9 | 77.9 | 63.2 |
| 33 | White enrollment | 3,406 | 5,156 | 4,025 | 6,008 | 6,053 | 6,000 | 2,754 | 2,652 | 3,553 | 4,144 | 1,867 |
| 34 | Colored enrollment | .......... | .......... | 50 | 246 | 170 | 42 | 61 | 40 | .......... | 10 | .......... |
| 35 | Number of private schools | 2 | 2 | 2 | 3 | 1 | 1 | .......... | .......... | .......... | 2 | .......... |
| 36 | Private-school enrollment 20 years of age or **under** | 226 | 150 | 250 | 325 | 395 | 250 | .......... | .......... | .......... | 150 | .......... |
| 37 | Public and private school enrollment | 3,632 | 5,306 | 4,325 | 6,579 | 6,618 | 6,292 | .......... | .......... | .......... | 4,304 | .......... |
| 38 | Per cent of enrollment in private schools | 6.2 | 2.8 | 5.7 | 4.9 | 5.9 | 3.9 | .......... | .......... | .......... | 3.4 | .......... |

| | PUBLIC SCHOOLS. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 39 | Average attendance | 1,618 | 2,999 | 2,531 | 3,156 | 3,255 | 2,902 | 1,393 | | 2,438 | 2,168 | 931 |
| 40 | White | 1,618 | 2,999 | 2,500 | 3,046 | 3,153 | 2,881 | 1,363 | | 2,438 | 2,159 | 931 |
| 41 | Colored | | | 31 | 110 | 103 | 21 | 30 | | | 9 | |
| 42 | Number attending daily in each 100 enrolled | 47.5 | 58.1 | 62.1 | 50.4 | 52.3 | 48.2 | 49.5 | | 68.6 | 52.1 | 49.8 |
| 43 | White | 47 | 58 | 62 | 50 | 52 | 48 | 49 | | 68 | 52 | 49 |
| 44 | Colored | | | 62 | 44 | 60 | 50 | 49 | | | 90 | |
| 45 | Number attending daily in each 100 of population 6 to 20 | 38.7 | 45.7 | 58.7 | 37.6 | 43.9 | 38.5 | 38.5 | | 57.5 | 40.5 | 31.4 |
| 46 | Length of session, in days | 118 | 115 | 112 | 111 | 119 | 113 | 121 | 120 | 107 | 129 | 122 |
| 47 | Number of days each child enrolled attended | 56.0 | 66.8 | 69.5 | 55.9 | 62.1 | 54.4 | 59.8 | | 73.4 | 67.2 | 60.7 |
| 48 | Number of days each child 6 to 20 years of age attended | 45.6 | 52.5 | 65.7 | 41.7 | 52.2 | 43.5 | 46.5 | | 61.5 | 52.2 | 38.3 |
| 49 | Number of teachers | 71 | 93 | 63 | 116 | 102 | 111 | 48 | 57 | 73 | 80 | 37 |
| 50 | Enrollment per teacher | 47 | 55 | 64 | 53 | 61 | 54 | 54 | 47 | 48 | 51 | 50 |
| 51 | Teachers' salaries | $17,201 | $24,897 | $17,430 | $32,725 | $29,339 | $30,775 | $15,193 | $14,590 | $17,307 | $21,203 | $11,315 |
| 52 | Average annual salary | $242 | $267 | $276 | $282 | $287 | $277 | $316 | $255 | $237 | $265 | $305 |
| 53 | Teachers with normal training[2] | | | | | | | | | | | |
| 54 | Per cent of teachers with normal school training[2] | | | | | | | | | | | |
| 55 | Teachers holding third-grade certificates | 5 | 9 | 27 | 10 | 6 | 6 | 1 | 8 | 5 | 1 | 0 |
| 56 | Per cent of teachers holding third-grade certificates | 7.0 | 9.6 | 42.8 | 8.6 | 5.8 | 5.4 | 2.0 | 14.0 | 6.8 | 1.2 | 0 |
| 57 | Total school expenditures | $22,094 | $34,806 | $22,949 | $45,336 | $39,642 | $39,850 | $19,745 | $17,669 | $22,045 | $23,658 | $16,430 |
| 58 | Amount received from the State | $17,816 | $25,062 | $17,172 | $33,772 | $30,624 | $29,510 | $15,441 | $14,849 | $17,812 | $22,164 | $10,905 |
| 59 | Per cent received from the State | 80 | 72 | 74 | 74 | 77 | 74 | 78 | 84 | 80 | 92 | 66 |
| 60 | Expenditure per child enrolled | $6.48 | $6.57 | $5.62 | $7.54 | $6.37 | $6.58 | $7.01 | $6.56 | $6.20 | $5.69 | $8.80 |
| 61 | Expenditure per child enrolled 6 to 20 years of age | $5.28 | $5.17 | $5.31 | $5.63 | $5.35 | $5.25 | $5.46 | $4.94 | $5.20 | $4.43 | $5.56 |
| 62 | Per cent of total expenditures used for teachers' salaries | 77.8 | 71.5 | 75.9 | 72.2 | 74.0 | 77.2 | 76.9 | 82.5 | 78.5 | 89.6 | 68.8 |
| 63 | Tuition per child enrolled | $5.04 | $4.69 | $4.26 | $5.44 | $4.71 | $5.07 | $5.39 | $5.41 | $4.86 | $5.09 | $5.87 |
| 64 | Tuition per child enrolled 6 to 20 years of age | $4.10 | $3.69 | $4.03 | $4.06 | $3.88 | $4.05 | $4.19 | $4.07 | $4.08 | $3.96 | $3.71 |
| 65 | Value of school buildings | $40,975 | $8,000 | $17,700 | $30,000 | $25,000 | $40,000 | $13,000 | $15,937 | $25,000 | $15,570 | $7,000 |
| 66 | Average value of school buildings | $569 | $98 | $300 | $340 | $271 | $404 | $295 | $312 | $390 | $222 | $200 |
| 67 | Number of school libraries | 27 | 37 | 0 | 12 | 20 | 5 | 0 | 2 | | 11 | 2 |
| 68 | Number of volumes in libraries | 450 | 438 | 0 | 250 | 500 | 50 | 0 | | | 340 | 50 |
| 69 | Average number of volumes | 16 | 11 | 0 | 20 | 25 | 10 | 0 | | | 30 | 25 |
| 70 | Circulating libraries used[2] | | | | | | | | | | | |
| 71 | Enrollment in high school | | 0 | 0 | 25 | 25 | 3 | 0 | 0 | 0 | 0 | 26 |
| 72 | Enrolled in high school from every 100 of population 6 to 20 years of age | | | | 0.29 | 0.33 | 0.04 | | | | | 0.87 |

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[1] Corbin lies in Knox and Whitley Counties.

[2] No data.

## *School statistics of Kentucky*—Continued.

[The mountain counties are in *italic*.]

| | | Morgan County. | *Owsley* County. | *Perry* County. | *Pike* County. | Powell County. | Pulaski County. | *Rock-castle* County. | Wayne County. | Whitley County. | *Wolfe* County. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Population: | | | | | | | | | | |
| 1 | Total | 16,259 | 7,979 | 11,255 | 31,679 | 6,268 | 35,986 | 14,473 | 17,518 | 31,982 | 9,864 |
| 2 | White | 16,225 | 7,904 | 11,041 | 31,347 | 5,931 | 34,799 | 14,348 | 16,779 | 30,859 | 9,808 |
| 3 | Colored | 34 | 75 | 214 | 332 | 337 | 1,187 | 125 | 739 | 1,111 | 56 |
| 4 | Per cent colored | 0.2 | 0.9 | 1.9 | 1.0 | 5.4 | 3.3 | 0.9 | 4.2 | 3.5 | 0.6 |
| 5 | Foreign white | 3 | 1 | 0 | 106 | 3 | 126 | 18 | 13 | 145 | 4 |
| 6 | Per cent foreign white | .......... | .......... | .......... | 0.3 | .......... | 0.4 | 0.1 | 0.1 | 0.5 | .......... |
| 7 | Native white of native parentage | 16,207 | 7,894 | 11,032 | 31,142 | 5,921 | 34,295 | 14,302 | 16,745 | 30,430 | 9,800 |
| 8 | Per cent of native white of native parentage | 99.7 | 98.9 | 98.0 | 98.3 | 94.5 | 95.3 | 98.8 | 95.6 | 95.1 | 99.4 |
| 9 | Urban | .......... | .......... | .......... | .......... | .......... | 4,491 | .......... | .......... | [1] 1,735 | .......... |
| 10 | Rural | 16,259 | 7,979 | 11,255 | 31,679 | 6,268 | 31,495 | 14,473 | 17,518 | 30,247 | 9,864 |
| 11 | Of largest city or village | 442 | 236 | 537 | 1,280 | 581 | 4,491 | 930 | 1,338 | [1] 2,589 | 326 |
| 12 | Rural per square mile | 44.5 | 36.9 | 33.6 | 40.7 | 34.6 | 40.4 | 46.7 | 29.7 | 51.7 | 42.9 |
| 13 | Area, square miles | 365 | 216 | 335 | 779 | 181 | 779 | 310 | 590 | 585 | 230 |
| 14 | Average area (square miles) tributary to each white school | 4.4 | 5.8 | 5.5 | 4.8 | 5.9 | 5.1 | 4.4 | 6.4 | 4.7 | 4.6 |
| 15 | Number of white schools | 82 | 37 | 60 | 161 | 31 | 152 | 70 | 92 | 122 | 49 |
| 16 | Schools necessary to provide one for each 12 square miles | 31 | 18 | 28 | 65 | 16 | 65 | 26 | 50 | 49 | 20 |
| 17 | Population 6 to 20 years of age per school | 74 | 81 | 72 | 79 | 73 | 85 | 76 | 65 | 90 | 74 |
| 18 | Population 6 to 20 years of age for each 12 square miles | 193 | 171 | 157 | 188 | 138 | 201 | 208 | 126 | 248 | 190 |
| 19 | Number of one-teacher schools | 75 | 33 | 60 | 149 | 30 | 138 | 68 | 95 | 116 | 49 |
| 20 | Per cent of one-teacher schools | 92.5 | 86.8 | 98.3 | 96.1 | 100 | 89.6 | 95.7 | 98.9 | 88.5 | 96.0 |
| 21 | Population 10 years of age and over | 11,265 | 5,342 | 7,288 | 21,132 | 4,427 | 25,420 | 9,830 | 12,124 | 21,912 | 6,619 |
| 22 | Illiterate | 1,820 | 1,103 | 1,928 | 4,866 | 896 | 2,930 | 1,708 | 2,465 | 2,911 | 974 |
| 23 | Per cent of illiterate | 16.2 | 20.6 | 26.5 | 23.0 | 20.2 | 11.5 | 17.4 | 20.3 | 13.3 | 14.7 |
| 24 | Native white 10 years of age and over | 11,239 | 5,289 | 7,144 | 20,772 | 4,152 | 24,365 | 9,723 | 11,561 | 20,948 | 6,580 |
| 25 | Illiterate | 1,812 | 1,080 | 1,895 | 4,739 | 809 | 2,723 | 1,672 | 2,287 | 2,739 | 969 |
| 26 | Per cent of illiterate | 16.1 | 20.4 | 26.5 | 22.8 | 19.5 | 11.2 | 17.2 | 19.8 | 13.1 | 14.7 |
| 27 | Population 10 to 20 years of age | 4,185 | 2,087 | 2,981 | 8,463 | 1,524 | 9,151 | 3,663 | 4,320 | 8,192 | 2,613 |
| 28 | Illiterate | 397 | 236 | 454 | 1,048 | 229 | 460 | 280 | 553 | 488 | 285 |
| 29 | Per cent of illiterate | 9.5 | 11.3 | 15.2 | 12.4 | 15.0 | 5.0 | 7.6 | 12.8 | 6.0 | 10.9 |
| 30 | Population 6 to 20 years of age | 6,010 | 3,095 | 4,402 | 12,278 | 2,212 | 13,117 | 5,428 | 6,300 | 11,920 | 3,813 |
| 31 | School enrollment (public) | 4,962 | 2,457 | 2,562 | 9,238 | 1,238 | .......... | .......... | 4,809 | 8,560 | 2,918 |
| 32 | Number enrolled from each 100 of population 6 to 20 | 82.5 | 79.3 | 58.2 | 75.1 | 55.9 | .......... | .......... | 76.3 | 71.7 | 76.5 |
| 33 | White enrollment | 4,962 | 2,435 | 2,500 | 9,186 | 1,146 | .......... | .......... | 4,637 | 8,300 | 2,910 |
| 34 | Colored enrollment | .......... | 22 | 62 | 52 | 92 | .......... | .......... | 172 | 260 | 8 |
| 35 | Number of private schools | .......... | 1 | 2 | 3 | .......... | .......... | 1 | 4 | 4 | 1 |
| 36 | Private-school enrollment, 20 years of age or under | .......... | 40 | 400 | 495 | .......... | .......... | 43 | 80 | 100 | 315 |
| 37 | Public and private school enrollment | .......... | 2,497 | 2,900 | 0,733 | .......... | .......... | .......... | 4,889 | 8,660 | 3,233 |
| 38 | Per cent of enrollment in private schools | .......... | 1.6 | 13.7 | 5.0 | .......... | .......... | .......... | 1.6 | 1.1 | 9.7 |

| | PUBLIC SCHOOLS. | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 39 | Average attendance | ... | 1,465 | 1,055 | 4,367 | 771 | ... | 2,321 | 2,004 | 4,575 | 1,556 |
| 40 | White | ... | 1,456 | 1,013 | 4,340 | 723 | ... | 2,202 | 1,932 | 4,400 | 1,551 |
| 41 | Colored | ... | 9 | 42 | 27 | 48 | ... | 119 | 72 | 175 | 5 |
| 42 | Number attending daily in each 100 enrolled | ... | 59.6 | 41.1 | 47.2 | 62.5 | ... | ... | 41.6 | 53.4 | 53.3 |
| 43 | White | ... | 59 | 41 | 47 | 63 | ... | ... | 41 | 53 | 53 |
| 44 | Colored | ... | 40 | 67 | 51 | 52 | ... | ... | 41 | 67 | 62 |
| 45 | Number attending daily in each 100 of population 6 to 20 | ... | 47.2 | 23.9 | 35.4 | 34.9 | ... | ... | 31.7 | 38.2 | 40.7 |
| 46 | Length of session, in days | ... | 123 | 130 | 118 | 130 | 127 | 111 | 117 | 135 | 125 |
| 47 | Number of days each child enrolled attended | ... | 73.3 | 53.4 | 55.6 | 81.2 | ... | ... | 48.6 | 72.0 | 66.6 |
| 48 | Number of days each child 6 to 20 years of age attended | ... | 58.0 | 31.0 | 41.7 | 45.3 | ... | ... | 37.0 | 51.5 | 50.8 |
| 49 | Number of teachers | 91 | 46 | 62 | 164 | 34 | 191 | 80 | 105 | 151 | 55 |
| 50 | Enrollment per teacher | 54 | 53 | 41 | 56 | 36 | ... | ... | 45 | 56 | 53 |
| 51 | Teachers' salaries | $24,673 | $12,111 | $18,171 | $49,129 | $8,500 | $50,999 | $21,078 | $25,855 | $47,667 | $15,808 |
| 52 | Average annual salary | $271 | $263 | $293 | $299 | $250 | $267 | $263 | $246 | $315 | $287 |
| 53 | Teachers with normal training [2] | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 54 | Per cent of teachers with normal school training [2] | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 55 | Teachers holding third-grade certificates | 0 | 4 | 12 | 28 | 0 | 50 | 21 | 6 | 26 | 2 |
| 56 | Per cent of teachers holding third-grade certificates | 0 | 8.7 | 18.7 | 17.0 | 0 | 26.1 | 26.2 | 5.7 | 17.2 | 3.6 |
| 57 | Total school expenditures | $33,919 | $17,074 | $19,518 | $63,910 | $10,696 | $103,613 | $31,099 | $34,782 | $84,470 | $18,882 |
| 58 | Amount received from the State | $23,639 | $11,970 | $18,178 | $48,202 | $8,924 | $56,275 | $21,948 | $26,580 | $47,415 | $16,696 |
| 59 | Per cent received from the State | 69 | 70 | 93 | 75 | 83 | 54 | 70 | 73 | 56 | 88 |
| 60 | Expenditure per child enrolled | $6.83 | $6.94 | $7.61 | $6.91 | $8.64 | ... | ... | $7.23 | $9.86 | $6.47 |
| 61 | Expenditure per child 6 to 20 years of age | $5.63 | $5.50 | $4.42 | $5.18 | $4.82 | ... | ... | $5.51 | $7.06 | $4.94 |
| 62 | Per cent of total expenditures used for teachers' salaries | 72.7 | 70.9 | 92.0 | 76.8 | 79.4 | 49.1 | 67.71 | 74.3 | 56.4 | 83.7 |
| 63 | Tuition per child enrolled | $4.96 | $4.92 | $7.00 | $5.30 | $6.86 | (2) | (2) | $5.37 | $5.56 | $5.41 |
| 64 | Tuition per child enrolled 6 to 20 years of age | $4.09 | $3.89 | $4.06 | $3.97 | $3.82 | (2) | (2) | $4.09 | $3.98 | $4.13 |
| 65 | Value of school buildings | $37,460 | $25,000 | $20,000 | $67,750 | $23,400 | $100,000 | $21,245 | $50,000 | $75,000 | $20,464 |
| 66 | Average value of school buildings | $462 | $625 | $350 | $460 | $887 | $666 | $299 | $520 | $572 | $401 |
| 67 | Number of school libraries | ... | ... | ... | 6 | ... | 92 | 5 | 2 | 30 | ... |
| 68 | Number of volumes in libraries | ... | ... | ... | 518 | ... | 2,905 | 215 | 20 | 1,200 | ... |
| 69 | Average number of volumes | ... | ... | ... | 86 | ... | 31 | 43 | 10 | 40 | ... |
| 70 | Circulating libraries used [2] | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 71 | Enrollment in high school | ... | 0 | 0 | 0 | 302 | 127 | 26 | 27 | 45 | 0 |
| 72 | **Enrolled in high school from every 100 of population 6 to 20 years of age** | ... | ... | ... | ... | 13.65 | 0.96 | 0.47 | 0.42 | 0.37 | ... |

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[1] Corbin lies in Knox and Whitley Counties.

[2] No data.

*School statistics of North Carolina.*

[The mountain counties are in *italic*.]

| | | Entire State. | *Alexander.* County. | *Alleghany.* County. | *Ashe* County. | Buncombe County. | Burke County. | *Cherokee* County. | *Clay* County. | *Graham* County. | Haywood County. | Henderson County. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Population: | | | | | | | | | | | |
| 1 | Total | 2,206,287 | 11,592 | 7,745 | 19,074 | 49,798 | 21,408 | 14,136 | 3,909 | 4,749 | 21,020 | 16,262 |
| 2 | White | 1,500,511 | 10,682 | 7,405 | 18,524 | 41,814 | 18,838 | 13,602 | 3,751 | 4,592 | 20,448 | 14,447 |
| 3 | Colored | 697,843 | 910 | 340 | 550 | 7,982 | 2,570 | 503 | 158 | .......... | 567 | 1,815 |
| 4 | Per cent colored | 31.6 | 7.9 | 4.4 | 2.9 | 16.0 | 12.0 | 3.6 | 4.0 | .......... | 2.7 | 11.2 |
| 5 | Foreign white | 5,942 | 1 | 2 | 11 | 499 | 142 | 11 | 1 | 1 | 69 | 75 |
| 6 | Per cent foreign white | 0.3 | .......... | .......... | 0.1 | 1.0 | 0.7 | 0.1 | .......... | .......... | 0.3 | 0.5 |
| 7 | Native white of native parentage | 1,485,718 | 10,657 | 7,381 | 18,488 | 40,547 | 18,598 | 13,571 | 3,749 | 4,589 | 20,300 | 14,220 |
| 8 | Per cent native white of native parentage | 67.3 | 91.9 | 95.3 | 96.9 | 81.4 | 86.9 | 96.0 | 95.9 | 96.6 | 96.6 | 87.4 |
| 9 | Urban | 318,474 | .......... | .......... | .......... | 18,762 | 2,712 | .......... | .......... | .......... | .......... | 2,818 |
| 10 | Rural | 1,887,813 | 11,592 | 7,745 | 19,074 | 31,036 | 18,696 | 14,136 | 3,909 | 4,749 | 21,020 | 13,444 |
| 11 | Largest city or village | 34,014 | 662 | 199 | 184 | 18,762 | 2,712 | 977 | .......... | 122 | 2,008 | 2,818 |
| 12 | Rural per square mile | 38.7 | 40.1 | 33.1 | 44.7 | 48.6 | 35.0 | 31.1 | 17.8 | 15.9 | 38.5 | 39.6 |
| 13 | Area, square miles | 48,740 | 289 | 234 | 427 | 639 | 534 | 454 | 220 | 298 | 546 | 358 |
| 14 | Average area (square miles) to each white school | 8.6 | 5.5 | 6.0 | 4.3 | 14.2 | 9.7 | 7.5 | 15.7 | 11.9 | 9.5 | 6.5 |
| 15 | Number of white schools | 5,613 | 52 | 39 | 98 | 45 | 55 | 60 | 14 | 25 | 57 | 55 |
| 16 | Schools necessary to provide one for each 12 square miles. | 4,062 | 25 | 20 | 36 | 54 | 45 | 38 | 19 | 25 | 46 | 30 |
| 17 | Population 6 to 20 years of age per school | 102 | 72 | 68 | 65 | 150 | 115 | 91 | 89 | 76 | 137 | 89 |
| 18 | Population 6 to 20 years of age for each 12 square miles | 193 | 167 | 143 | 197 | 308 | 168 | 136 | 75 | 70 | 164 | 191 |
| 19 | Number of one-teacher schools | 5,820 | 31 | 31 | 95 | 80 | 51 | 46 | 13 | 22 | 27 | 42 |
| 20 | Per cent of one-teacher schools | 75.9 | 53.5 | 74.0 | 78.0 | 72.1 | 78.5 | 80.8 | 81.3 | 95.7 | 49.1 | 65.7 |
| 21 | Population 10 years of age and over | 1,578,595 | 8,161 | 5,510 | 13,255 | 36,853 | 15,407 | 9,802 | 2,776 | 3,239 | 14,734 | 11,798 |
| 22 | Illiterate | 291,497 | 1,324 | 603 | 2,154 | 3,534 | 2,761 | 1,982 | 472 | 334 | 1,928 | 1,502 |
| 23 | Per cent of illiterate | 18.5 | 16.2 | 10.9 | 16.3 | 9.6 | 17.9 | 20.2 | 17.0 | 10.3 | 13.1 | 12.7 |
| 24 | Native white 10 years of age and over | 1,077,063 | 7,542 | 5,266 | 12,831 | 30,211 | 13,431 | 9,411 | 2,675 | 3,111 | 14,241 | 10,359 |
| 25 | Illiterate | 132,189 | 1,120 | 524 | 2,005 | 2,455 | 2,153 | 1,830 | 436 | 318 | 1,846 | 1,111 |
| 26 | Per cent of illiterate | 12.3 | 14.9 | 10.0 | 15.6 | 8.1 | 16.0 | 19.4 | 16.3 | 10.2 | 13.0 | 10.7 |
| 27 | Population 10 to 20 years of age | 552,986 | 2,931 | 1,994 | 4,924 | 11,861 | 5,368 | 3,600 | 987 | 1,204 | 5,274 | 4,043 |
| 28 | Illiterate | 59,271 | 232 | 115 | 379 | 442 | 572 | 793 | 97 | 63 | 460 | 371 |
| 29 | Per cent of illiterate | 10.7 | 7.9 | 5.8 | 7.7 | 3.7 | 10.7 | 10.9 | 9.8 | 5.2 | 8.7 | 9.2 |
| 30 | Population 6 to 20 years of age | 785,583 | 4,193 | 2,871 | 7,125 | 16,667 | 7,572 | 5,191 | 1,428 | 1,762 | 7,546 | 5,730 |
| 31 | School enrollment (public) | 525,507 | 3,729 | 2,461 | 6,900 | 12,373 | 4,397 | 4,479 | 903 | 1,081 | 5,257 | 4,049 |
| 32 | Number enrolled from each 100 of 6 to 20 years of age | 66.8 | 88.9 | 85.7 | 96.5 | 74.2 | 58.0 | 86.2 | 63.2 | 61.4 | 69.6 | 70.6 |
| 33 | White enrollment | 373,234 | 3,464 | 2,387 | 6,740 | 10,772 | 3,872 | 4,439 | 874 | 1,081 | 5,088 | 3,644 |
| 34 | Colored enrollment | 152,273 | 265 | 74 | 160 | 1,601 | 525 | 40 | 39 | .......... | 169 | 405 |
| 35 | Number of private schools[1] | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 36 | Private school enrollment, elementary and high[1] | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 37 | Public and private school enrollment[1] | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 38 | Per cent enrolled in private schools[1] | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PUBLIC SCHOOLS. | | | | | | | | | | | |
| 39 | Average attendance | 332,546 | 3,108 | 1,718 | 2,395 | 8,447 | 2,548 | 2,785 | 746 | 716 | 3,486 | 2,317 |
| 40 | White | 242,798 | 2,900 | 1,660 | 2,295 | 7,315 | 2,219 | 2,759 | 736 | 716 | 3,378 | 2,101 |
| 41 | Colored | 89,748 | 208 | 58 | 100 | 1,132 | 328 | 25 | 10 | .......... | 108 | 216 |
| 42 | Number attending daily in each 100 enrolled | 63.2 | 83.2 | 69.8 | 34.7 | 68.6 | 57.9 | 62.1 | 82.6 | 66.2 | 66.3 | 57.2 |
| 43 | White | 65.0 | 83.7 | 69.5 | 34.0 | 68.3 | 57.2 | 62.1 | 84.2 | 66.2 | 66.3 | 57.6 |
| 44 | Colored | 58.9 | 78.5 | 78.3 | 62.5 | 70.7 | 62.4 | 62.5 | 25.7 | .......... | 63.9 | 53.3 |
| 45 | Number attending daily in each 100 of 6 to 20 years of age | 42.2 | 74.1 | 59.8 | 33.4 | 59.9 | 33.5 | 53.3 | 52.2 | 40.6 | 46.1 | 40.3 |
| 46 | Length of session, in days | 108.7 | 78.0 | 80.1 | 73.5 | 140.4 | 100.8 | 108.7 | 83.8 | 80.0 | 124.4 | 102.7 |
| 47 | Number of days each child enrolled attended | 68.6 | 64.8 | 55.9 | 25.5 | 96.3 | 58.3 | 67.5 | 69.2 | 52.9 | 72.4 | 58.7 |
| 48 | Number of days each child 6 to 20 years of age attended | 45.7 | 57.7 | 47.8 | 24.5 | 71.4 | 33.7 | 57.9 | 43.7 | 32.4 | 57.3 | 41.3 |
| 49 | Number of teachers | 11,915 | 77 | 57 | 120 | 247 | 87 | 88 | 17 | 26 | 100 | 95 |
| 50 | Enrollment per teacher | 44 | 48 | 43 | 57 | 50 | 50 | 50 | 53 | 41 | 52 | 42 |
| 51 | Teachers' salaries | $2,327,239 | $10,118 | $6,906 | $13,713 | $93,364 | $16,691 | $17,616 | $1,977 | $3,240 | $21,844 | $15,799 |
| 52 | Average annual salary | $195 | $131 | $121 | $114 | $377 | $190 | $200 | $116 | $124 | $218 | $166 |
| 53 | Teachers with normal training | 4,945 | 9 | 57 | 9 | 132 | 23 | 14 | 5 | 3 | 26 | 24 |
| 54 | Per cent of teachers with normal training | 41.5 | 11.7 | 100 | 7.5 | 53.4 | 26.4 | 15.9 | 29.4 | 11.5 | 26.0 | 25.2 |
| 55 | Teachers holding third-grade certificates | 154 | .......... | 1 | .......... | .......... | .......... | 4 | .......... | .......... | 2 | .......... |
| 56 | Per cent of teachers holding third-grade certificates | 1.2 | .......... | 1.7 | .......... | .......... | .......... | 4.5 | .......... | .......... | 2.0 | .......... |
| 57 | Total school expenditures | $4,078,120 | $17,199 | $15,236 | $17,505 | $151,017 | $27,914 | $32,409 | $6,587 | $7,475 | $41,119 | $23,301 |
| 58 | Amount received from State | $281,279 | $4,641 | $5,582 | $4,993 | $4,334 | $3,275 | $1,853 | $2,247 | $815 | $1,863 | $2,726 |
| 59 | Per cent received from State | 6.9 | 26.9 | 36.6 | 28.5 | 2.8 | 12.0 | 5.7 | 34.1 | 10.9 | 4.5 | 11.6 |
| 60 | Expenditure per child enrolled | $7.75 | $4.61 | $6.19 | $2.53 | $12.20 | $6.34 | $7.23 | $7.29 | $5.91 | $7.82 | $5.75 |
| 61 | Expenditure per child 6 to 20 years of age | $5.19 | $4.09 | $5.30 | $2.45 | $9.06 | $3.68 | $6.24 | $4.61 | $4.24 | $5.44 | $4.06 |
| 62 | Per cent of expenditures used for teachers' salaries | 57.0 | 58.7 | 45.3 | 78.3 | 61.8 | 59.8 | 54.3 | 30.0 | 43.3 | 53.1 | 67.7 |
| 63 | Tuition per child enrolled | $4.41 | $2.70 | $2.80 | $1.98 | $7.53 | $3.79 | $3.92 | $2.18 | $2.55 | $4.15 | $3.89 |
| 64 | Tuition per child 6 to 20 years of age | $2.95 | $2.40 | $2.40 | $1.91 | $5.59 | $2.20 | $3.38 | $1.38 | $1.83 | $2.88 | $2.74 |
| 65 | Value of school buildings | $7,380,616 | $14,952 | $25,325 | $30,495 | $319,180 | $47,100 | $116,465 | $5,000 | $4,675 | $72,900 | $45,525 |
| 66 | Average value of school building | $949 | $271 | $633 | $282 | $268 | $713 | $1,974 | $333 | $194 | $1,221 | $758 |
| 67 | Number of school libraries [1] | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 68 | Number of volumes in libraries [1] | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 69 | Average number of volumes [1] | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 70 | Circulating libraries used [1] | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 71 | Enrolled in high school | 14,401 | 150 | 31 | 30 | 498 | 151 | 126 | 42 | .......... | 301 | 103 |
| 72 | Enrolled in high school from every 100 of population 6 to 20 years of age | 1.83 | 3.57 | 1.07 | 0.42 | 2.98 | 1.99 | 2.42 | .......... | .......... | 3.98 | 1.79 |

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[1] No data.

*School statistics of North Carolina.*

[The mountain counties are in *italic*.]

| | | Entire State. | *Alexander County.* | *Alleghany County.* | *Ashe County.* | Buncombe County. | Burke County. | *Cherokee County.* | *Clay County.* | *Graham County.* | *Haywood County.* | Henderson County. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Population: | | | | | | | | | | | |
| 1 | Total | 2,206,287 | 11,592 | 7,745 | 19,074 | 49,798 | 21,408 | 14,136 | 3,909 | 4,749 | 21,020 | 16,262 |
| 2 | White | 1,500,511 | 10,682 | 7,405 | 18,524 | 41,814 | 18,838 | 13,602 | 3,751 | 4,592 | 20,448 | 14,447 |
| 3 | Colored | 697,843 | 910 | 340 | 550 | 7,982 | 2,570 | 503 | 158 | ... | 567 | 1,815 |
| 4 | Per cent colored | 31.6 | 7.9 | 4.4 | 2.9 | 16.0 | 12.0 | 3.6 | 4.0 | ... | 2.7 | 11.2 |
| 5 | Foreign white | 5,942 | 1 | 2 | 11 | 499 | 142 | 11 | 1 | 1 | 69 | 75 |
| 6 | Per cent foreign white | 0.3 | ... | ... | 0.1 | 1.0 | 0.7 | 0.1 | ... | ... | 0.3 | 0.5 |
| 7 | Native white of native parentage | 1,485,718 | 10,657 | 7,381 | 18,488 | 40,547 | 18,598 | 13,571 | 3,749 | 4,589 | 20,300 | 14,220 |
| 8 | Per cent native white of native parentage | 67.3 | 91.9 | 95.3 | 96.9 | 81.4 | 86.9 | 96.0 | 95.9 | 96.6 | 96.6 | 87.4 |
| 9 | Urban | 318,474 | ... | ... | ... | 18,762 | 2,712 | ... | ... | ... | ... | 2,818 |
| 10 | Rural | 1,887,813 | 11,592 | 7,745 | 19,074 | 31,036 | 18,696 | 14,136 | 3,909 | 4,749 | 21,020 | 13,444 |
| 11 | Largest city or village | 34,014 | 662 | 199 | 184 | 18,762 | 2,712 | 977 | ... | 122 | 2,008 | 2,818 |
| 12 | Rural per square mile | 38.7 | 40.1 | 33.1 | 44.7 | 48.6 | 35.0 | 31.1 | 17.8 | 15.9 | 38.5 | 39.6 |
| 13 | Area, square miles | 48,740 | 289 | 234 | 427 | 639 | 534 | 454 | 220 | 298 | 546 | 358 |
| 14 | Average area (square miles) to each white school | 8.6 | 5.5 | 6.0 | 4.3 | 14.2 | 9.7 | 7.5 | 15.7 | 11.9 | 9.5 | 6.5 |
| 15 | Number of white schools | 5,613 | 52 | 39 | 98 | 45 | 55 | 60 | 14 | 25 | 57 | 55 |
| 16 | Schools necessary to provide one for each 12 square miles | 4,062 | 25 | 20 | 36 | 54 | 45 | 38 | 19 | 25 | 46 | 30 |
| 17 | Population 6 to 20 years of age per school | 102 | 72 | 68 | 65 | 150 | 115 | 91 | 89 | 76 | 137 | 89 |
| 18 | Population 6 to 20 years of age for each 12 square miles | 193 | 167 | 143 | 197 | 308 | 168 | 136 | 75 | 70 | 164 | 191 |
| 19 | Number of one-teacher schools | 5,820 | 31 | 31 | 95 | 80 | 51 | 46 | 13 | 22 | 27 | 42 |
| 20 | Per cent of one-teacher schools | 75.9 | 53.5 | 74.0 | 78.0 | 72.1 | 78.5 | 80.8 | 81.3 | 95.7 | 49.1 | 65.7 |
| 21 | Population 10 years of age and over | 1,578,595 | 8,161 | 5,510 | 13,255 | 36,853 | 15,407 | 9,802 | 2,776 | 3,239 | 14,734 | 11,798 |
| 22 | Illiterate | 291,497 | 1,324 | 603 | 2,154 | 3,534 | 2,761 | 1,982 | 472 | 334 | 1,928 | 1,502 |
| 23 | Per cent of illiterate | 18.5 | 16.2 | 10.9 | 16.3 | 9.6 | 17.9 | 20.2 | 17.0 | 10.3 | 13.1 | 12.7 |
| 24 | Native white 10 years of age and over | 1,077,063 | 7,542 | 5,266 | 12,831 | 30,211 | 13,431 | 9,411 | 2,675 | 3,111 | 14,241 | 10,359 |
| 25 | Illiterate | 132,189 | 1,120 | 524 | 2,005 | 2,455 | 2,153 | 1,830 | 436 | 318 | 1,846 | 1,111 |
| 26 | Per cent of illiterate | 12.3 | 14.9 | 10.0 | 15.6 | 8.1 | 16.0 | 19.4 | 16.3 | 10.2 | 13.0 | 10.7 |
| 27 | Population 10 to 20 years of age | 552,986 | 2,931 | 1,994 | 4,924 | 11,861 | 5,368 | 3,600 | 987 | 1,204 | 5,274 | 4,043 |
| 28 | Illiterate | 59,271 | 232 | 115 | 379 | 442 | 572 | 793 | 97 | 63 | 460 | 371 |
| 29 | Per cent of illiterate | 10.7 | 7.9 | 5.8 | 7.7 | 3.7 | 10.7 | 10.9 | 9.8 | 5.2 | 8.7 | 9.2 |
| 30 | Population 6 to 20 years of age | 785,583 | 4,193 | 2,871 | 7,125 | 16,667 | 7,572 | 5,191 | 1,428 | 1,762 | 7,546 | 5,730 |
| 31 | School enrollment (public) | 525,507 | 3,729 | 2,461 | 6,900 | 12,373 | 4,397 | 4,479 | 903 | 1,081 | 5,257 | 4,049 |
| 32 | Number enrolled from each 100 of 6 to 20 years of age | 66.8 | 88.9 | 85.7 | 96.5 | 74.2 | 58.0 | 86.2 | 63.2 | 61.4 | 69.6 | 70.6 |
| 33 | White enrollment | 373,234 | 3,464 | 2,387 | 6,740 | 10,772 | 3,872 | 4,439 | 874 | 1,081 | 5,088 | 3,644 |
| 34 | Colored enrollment | 152,273 | 265 | 74 | 160 | 1,601 | 525 | 40 | 39 | ... | 169 | 405 |
| 35 | Number of private schools[1] | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 36 | Private school enrollment, elementary and high[1] | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 37 | Public and private school enrollment[1] | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 38 | Per cent enrolled in private schools[1] | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |

| | PUBLIC SCHOOLS. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 39 | Average attendance | 332,546 | 3,108 | 1,718 | 2,395 | 8,447 | 2,548 | 2,785 | 746 | 716 | 3,486 | 2,317 |
| 40 | White | 242,798 | 2,900 | 1,660 | 2,295 | 7,315 | 2,219 | 2,759 | 736 | 716 | 3,378 | 2,101 |
| 41 | Colored | 89,748 | 208 | 58 | 100 | 1,132 | 328 | 25 | 10 | .......... | 108 | 216 |
| 42 | Number attending daily in each 100 enrolled | 63.2 | 83.2 | 69.8 | 34.7 | 68.6 | 57.9 | 62.1 | 82.6 | 66.2 | 66.3 | 57.2 |
| 43 | White | 65.0 | 83.7 | 69.5 | 34.0 | 68.3 | 57.2 | 62.1 | 84.2 | 66.2 | 66.3 | 57.6 |
| 44 | Colored | 58.9 | 78.5 | 78.3 | 62.5 | 70.7 | 62.4 | 62.5 | 25.7 | .......... | 63.9 | 53.3 |
| 45 | Number attending daily in each 100 of 6 to 20 years of age | 42.2 | 74.1 | 59.8 | 33.4 | 59.9 | 33.5 | 53.3 | 52.2 | 40.6 | 46.1 | 40.3 |
| 46 | Length of session, in days | 108.7 | 78.0 | 80.1 | 73.5 | 140.4 | 100.8 | 108.7 | 83.8 | 80.0 | 124.4 | 102.7 |
| 47 | Number of days each child enrolled attended | 68.6 | 64.8 | 55.9 | 25.5 | 96.3 | 58.3 | 67.5 | 69.2 | 52.9 | 72.4 | 58.7 |
| 48 | Number of days each child 6 to 20 years of age attended | 45.7 | 57.7 | 47.8 | 24.5 | 71.4 | 33.7 | 57.9 | 43.7 | 32.4 | 57.3 | 41.3 |
| 49 | Number of teachers | 11,915 | 77 | 57 | 120 | 247 | 87 | 88 | 17 | 26 | 100 | 95 |
| 50 | Enrollment per teacher | 44 | 48 | 43 | 57 | 50 | 50 | 50 | 53 | 41 | 52 | 42 |
| 51 | Teachers' salaries | $2,327,239 | $10,118 | $6,906 | $13,713 | $93,364 | $16,691 | $17,616 | $1,977 | $3,240 | $21,844 | $15,799 |
| 52 | Average annual salary | $195 | $131 | $121 | $114 | $377 | $190 | $200 | $116 | $124 | $218 | $166 |
| 53 | Teachers with normal training | 4,945 | 9 | 57 | 9 | 132 | 23 | 14 | 5 | 3 | 26 | 24 |
| 54 | Per cent of teachers with normal training | 41.5 | 11.7 | 100 | 7.5 | 53.4 | 26.4 | 15.9 | 29.4 | 11.5 | 26.0 | 25.2 |
| 55 | Teachers holding third-grade certificates | 154 | .......... | 1 | .......... | .......... | .......... | 4 | .......... | .......... | 2 | .......... |
| 56 | Per cent of teachers holding third-grade certificates | 1.2 | .......... | 1.7 | .......... | .......... | .......... | 4.5 | .......... | .......... | 2.0 | .......... |
| 57 | Total school expenditures | $4,078,120 | $17,199 | $15,236 | $17,505 | $151,017 | $27,914 | $32,409 | $6,587 | $7,475 | $41,119 | $23,301 |
| 58 | Amount received from State | $281,279 | $4,641 | $5,582 | $4,993 | $4,334 | $3,275 | $1,853 | $2,247 | $815 | $1,863 | $2,726 |
| 59 | Per cent received from State | 6.9 | 26.9 | 36.6 | 28.5 | 2.8 | 12.0 | 5.7 | 34.1 | 10.9 | 4.5 | 11.6 |
| 60 | Expenditure per child enrolled | $7.75 | $4.61 | $6.19 | $2.53 | $12.20 | $6.34 | $7.23 | $7.29 | $5.91 | $7.82 | $5.75 |
| 61 | Expenditure per child 6 to 20 years of age | $5.19 | $4.09 | $5.30 | $2.45 | $9.06 | $3.68 | $6.24 | $4.61 | $4.24 | $5.44 | $4.06 |
| 62 | Per cent of expenditures used for teachers' salaries | 57.0 | 58.7 | 45.3 | 78.3 | 61.8 | 59.8 | 54.3 | 30.0 | 43.3 | 53.1 | 67.7 |
| 63 | Tuition per child enrolled | $4.41 | $2.70 | $2.80 | $1.98 | $7.53 | $3.79 | $3.92 | $2.18 | $2.55 | $4.15 | $3.89 |
| 64 | Tuition per child 6 to 20 years of age | $2.95 | $2.40 | $2.40 | $1.91 | $5.59 | $2.20 | $3.38 | $1.38 | $1.83 | $2.88 | $2.74 |
| 65 | Value of school buildings | $7,380,616 | $14,952 | $25,325 | $30,495 | $319,180 | $47,100 | $116,465 | $5,000 | $4,675 | $72,900 | $45,525 |
| 66 | Average value of school building | $949 | $271 | $633 | $282 | $268 | $713 | $1,974 | $333 | $194 | $1,221 | $758 |
| 67 | Number of school libraries [1] | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 68 | Number of volumes in libraries [1] | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 69 | Average number of volumes [1] | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 70 | Circulating libraries used [1] | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 71 | Enrolled in high school | 14,401 | 150 | 31 | 30 | 498 | 151 | 126 | 42 | .......... | 301 | 103 |
| 72 | Enrolled in high school from every 100 of population 6 to 20 years of age | 1.83 | 3.57 | 1.07 | 0.42 | 2.98 | 1.99 | 2.42 | .......... | .......... | 3.98 | 1.79 |

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[1] No data.

*School statistics of North Carolina*—Continued.

[The mountain counties are in *italic*.]

| | | *Jackson* County. | Macon County. | Madison County. | McDowell County. | *Polk* County. | Rutherford County. | Stokes County. | Surry County. | Swain County. | Transylvania County. | Wilkes County. | Yancey County. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Population: | | | | | | | | | | | | |
| 1 | Total | 12,998 | 12,191 | 20,132 | 13,538 | 7,640 | 28,385 | 20,151 | 29,705 | 10,403 | 7,191 | 30,282 | 12,072 |
| 2 | White | 11,945 | 11,615 | 19,700 | 11,458 | 6,546 | 24,097 | 17,582 | 27.068 | 9,406 | 6,553 | 27,691 | 11,839 |
| 3 | Colored | 603 | 576 | 432 | 2,080 | 1,094 | 4,288 | 2,569 | 2,632 | 185 | 638 | 2,591 | 233 |
| 4 | Per cent colored | 4.6 | 4.7 | 2.1 | 15.4 | 14.3 | 15.1 | 12.7 | 8.9 | 1.8 | 8.9 | 8.6 | 1.9 |
| 5 | Foreign white | 13 | 14 | 14 | 17 | 25 | 18 | 2 | 140 | 9 | 24 | 9 | 3 |
| 6 | Per cent foreign white | 0.1 | 0.1 | 0.1 | 0.1 | 0.3 | 0.1 | | 0.5 | 0.1 | 0.3 | | |
| 7 | Native white of native parentage | 11,894 | 11,562 | 19,653 | 11,381 | 6,478 | 24,039 | 17,571 | 26,832 | 9,386 | 6,481 | 27,666 | 11,825 |
| 8 | Per cent native white of native parentage | 91.5 | 94.8 | 97.6 | 84.1 | 84.8 | 84.7 | 87.2 | 90.3 | 90.2 | 90.1 | 91.4 | 98.0 |
| 9 | Urban | | | | | | | | 3,844 | | | | |
| 10 | Rural | 12,998 | 12,191 | 20,132 | 13,538 | 7,640 | 28,385 | 20,151 | 25,861 | 10,403 | 7,141 | 30,282 | 12,072 |
| 11 | Largest city or village | 698 | 379 | 802 | 1,519 | 700 | 1,592 | 480 | 3,844 | 612 | 919 | 1,902 | 422 |
| 12 | Rural per square mile | 26.3 | 23.8 | 46.2 | 30.6 | 30.4 | 52.2 | 42.0 | 49.7 | 18.8 | 19.0 | 41.2 | 40.5 |
| 13 | Area, square miles | 494 | 513 | 436 | 443 | 251 | 544 | 480 | 520 | 553 | 379 | 735 | 298 |
| 14 | Average area (sq. mi.) to each white school | 10.2 | 8.8 | 6.1 | 8.5 | 7.1 | 6.8 | 7.0 | 5.6 | 11.3 | 14.0 | 5.7 | 5.9 |
| 15 | Number of white schools | 48 | 58 | 71 | 52 | 35 | 79 | 68 | 92 | 49 | 27 | 128 | 50 |
| 16 | Schools necessary to provide one for each 12 square miles | 42 | 43 | 37 | 37 | 21 | 46 | 40 | 44 | 47 | 32 | 62 | 25 |
| 17 | Population 6 to 20 years of age per school | 95 | 71 | 100 | 78 | 60 | 100 | 97 | 102 | 77 | 65 | 74 | 86 |
| 18 | Population 6 to 20 years of age for each 12 square miles | 113 | 103 | 203 | 132 | 128 | 223 | 190 | 242 | 80 | 67 | 174 | 179 |
| 19 | Number of one-teacher schools | 32 | 50 | 60 | 45 | 42 | 70 | 49 | 70 | 42 | 19 | 116 | 35 |
| 20 | Per cent of one-teacher schools | 64.0 | 80.7 | 80.0 | 72.6 | 93.4 | 68.7 | 62.9 | 67.4 | 85.8 | 57.6 | 79.5 | 67.4 |
| 21 | Population 10 years of age and over | 9,009 | 8,470 | 13,855 | 9,603 | 5,380 | 19,903 | 13,731 | 20,814 | 7,091 | 5,132 | 21,226 | 8,367 |
| 22 | Illiterate | 1,492 | 1,151 | 2,651 | 1,195 | 898 | 3,507 | 3,171 | 4,351 | 1,396 | 675 | 4,610 | 1,667 |
| 23 | Per cent of illiterate | 16.6 | 13.6 | 19.1 | 12.4 | 16.7 | 17.6 | 23.1 | 20.9 | 19.7 | 13.2 | 21.7 | 19.9 |
| 24 | Native white 10 years of age and over | 8,260 | 8,056 | 13,530 | 8,088 | 4,566 | 16,933 | 11,965 | 18,774 | 6,376 | 4,651 | 19,399 | 8,199 |
| 25 | Illiterate | 1,200 | 1,032 | 2,535 | 794 | 690 | 2,590 | 2,447 | 3,573 | 1,149 | 543 | 4,214 | 1,601 |
| 26 | Per cent of illiterate | 15.3 | 12.8 | 18.7 | 9.8 | 15.1 | 15.3 | 20.5 | 19.0 | 18.0 | 11.7 | 21.7 | 19.5 |
| 27 | Population 10 to 20 years of age | 3,299 | 3,046 | 5,224 | 3,441 | 1,898 | 7,248 | 5,185 | 7,454 | 2,586 | 1,742 | 7,597 | 3,199 |
| 28 | Illiterate | 290 | 183 | 475 | 230 | 237 | 888 | 618 | 837 | 300 | 149 | 839 | 326 |
| 29 | Per cent of illiterate | 8.8 | 6.0 | 9.1 | 6.7 | 12.5 | 12.3 | 11.9 | 11.2 | 11.6 | 8.6 | 11.0 | 10.2 |
| 30 | Population 6 to 20 years of age | 4,781 | 4,452 | 7,517 | 4,897 | 2,702 | 10,268 | 7,622 | 10,682 | 3,774 | 2,486 | 10,864 | 4,496 |
| 31 | School enrollment (public) | 3,251 | 3,282 | 6,958 | 4,160 | 1,518 | 6,885 | 4,859 | 7,628 | 2,930 | 1,731 | 8,388 | 3,434 |
| 32 | Number enrolled from each 100 of 6 to 20 years of age | 67.9 | 73.7 | 92.5 | 84.9 | 56.1 | 67.0 | 63.7 | 71.4 | 77.6 | 69.6 | 77.2 | 76.6 |
| 33 | White enrollment | 3,067 | 3,140 | 6,808 | 3,851 | 1,244 | 5,778 | 4,323 | 7,004 | 2,880 | 1,653 | 7,554 | 3,365 |
| 34 | Colored enrollment | 184 | 142 | 150 | 309 | 274 | 1,107 | 536 | 624 | 30 | 78 | 834 | 69 |
| 35 | Number of private schools[1] | | | | | | | | | | | | |
| 36 | Private school enrollment, elementary and high[1] | | | | | | | | | | | | |
| 37 | Public and private school enrollment[1] | | | | | | | | | | | | |
| 38 | Per cent enrolled in private schools[1] | | | | | | | | | | | | |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PUBLIC SCHOOLS. | | | | | | | | | | | | |
| 39 | Average attendance | 1,877 | 2,331 | 5,222 | 3,216 | 996 | 4,525 | 2,550 | 4,458 | 1,515 | 1,024 | 4,910 | 1,364 |
| 40 | White | 1,777 | 2,241 | 5,106 | 2,996 | 783 | 3,913 | 2,313 | 4,110 | 1,494 | 968 | 4,345 | 1,346 |
| 41 | Colored | 100 | 90 | 116 | 220 | 213 | 612 | 237 | 348 | 21 | 56 | 565 | 18 |
| 42 | Number attending daily in each 100 enrolled | 57.7 | 70.9 | 75.0 | 77.3 | 65.9 | 65.7 | 52.4 | 58.4 | 51.7 | 59.1 | 58.5 | 39.7 |
| 43 | White | 57.9 | 71.4 | 75.0 | 77.7 | 62.9 | 77.7 | 53.5 | 58.6 | 51.9 | 58.5 | 57.5 | 40.0 |
| 44 | Colored | 54.4 | 63.4 | 77.3 | 71.2 | 77.7 | 55.3 | 44.2 | 55.7 | 70.0 | 71.8 | 67.7 | 26.1 |
| 45 | Number attending daily in each 100 of 6 to 20 years of age | 39.1 | 52.2 | 69.3 | 65.6 | 36.9 | 44.0 | 33.3 | 41.6 | 40.1 | 41.1 | 45.1 | 30.4 |
| 46 | Length of session, in days | 101.0 | 88.2 | 80.9 | 122.5 | 83.7 | 112.4 | 81.6 | 86.0 | 93.4 | 118.6 | 94.8 | 80.0 |
| 47 | Number of days each child enrolled attended | 58.2 | 62.5 | 60.6 | 94.6 | 55.1 | 73.8 | 42.7 | 50.2 | 48.2 | 70.0 | 55.4 | 31.7 |
| 48 | Number of days each child 6 to 20 years of age attended | 39.4 | 46.0 | 56.0 | 80.3 | 30.8 | 49.4 | 27.1 | 35.7 | 37.4 | 48.7 | 42.7 | 24.3 |
| 49 | Number of teachers | 78 | 76 | 103 | 84 | 45 | 147 | 97 | 151 | 63 | 46 | 189 | 70 |
| 50 | Enrollment per teacher | 41 | 43 | 67 | 49 | 33 | 46 | 50 | 50 | 46 | 37 | 44 | 49 |
| 51 | Teachers' salaries | $14,772 | $13,545 | $14,120 | $17,667 | $5,248 | $20,831 | $13,993 | $22,387 | $11,356 | $9,906 | $27,333 | $8,251 |
| 52 | Average annual salary | $189 | $178 | $137 | $210 | $116 | $141 | $144 | $148 | $180 | $215 | $144 | $117 |
| 53 | Teachers with normal training | 73 | 21 | 45 | 55 | 7 | 48 | 29 | 84 | 20 | 18 | 88 | 14 |
| 54 | Per cent of teachers with normal training | 93.5 | 27.6 | 43.6 | 65.4 | 15.5 | 32.6 | 29.8 | 55.6 | 31.7 | 39.1 | 46.5 | 20.0 |
| 55 | Teachers holding third-grade certificates | | 3 | | | | | | 3 | 3 | | 3 | 5 |
| 56 | Per cent of teachers holding third-grade certificates | | 3.9 | | | | | | 1.9 | 4.7 | | 1.5 | 7.1 |
| 57 | Total school expenditures | $26,317 | $17,098 | $38,385 | $33,674 | $7,303 | $28,515 | $23,608 | $37,072 | $21,234 | $17,414 | $36,796 | $13,558 |
| 58 | Amount received from State | $4,618 | $2,609 | $3,738 | $2,412 | $1,176 | $2,542 | $3,936 | $2,854 | $1,337 | $4,098 | $7,613 | $3,997 |
| 59 | Per cent received from State | 17.5 | 15.2 | 9.7 | 7.1 | 16.1 | 8.9 | 16.6 | 7.6 | 6.2 | 23.5 | 20.6 | 29.4 |
| 60 | Expenditure per child enrolled | $8.09 | $5.20 | $5.51 | $8.09 | $4.81 | $4.14 | $4.85 | $4.86 | $7.28 | $10.06 | $4.38 | $3.94 |
| 61 | Expenditure per child 6 to 20 years of age | $5.50 | $3.84 | $5.10 | $6.87 | $2.70 | $2.77 | $3.09 | $3.47 | $5.62 | $7.00 | $3.38 | $3.01 |
| 62 | Per cent expenditures used for teachers' salaries | 56.1 | 79.2 | 36.8 | 52.4 | 71.8 | 73.0 | 59.2 | 60.4 | 53.4 | 56.8 | 74.2 | 60.8 |
| 63 | Tuition per child enrolled | $4.53 | $4.11 | $2.02 | $4.24 | $3.45 | $3.02 | $2.87 | $2.93 | $3.88 | $5.71 | $3.24 | $2.39 |
| 64 | Tuition per child 6 to 20 years of age | $3.08 | $3.04 | $1.87 | $3.59 | $1.93 | $2.02 | $1.82 | $2.09 | $3.00 | $3.97 | $2.50 | $1.83 |
| 65 | Value of school buildings | $47,650 | $24,295 | $49,925 | $56,500 | $5,900 | $74,374 | $42,400 | $67,140 | $30,175 | $36,120 | $73,312 | $21,875 |
| 66 | Average value of school building | $238 | $398 | $658 | $911 | $155 | $722 | $543 | $632 | $656 | $1,204 | $492 | $561 |
| 67 | Number of school libraries [1] | | | | | | | | | | | | |
| 68 | Number of volumes in libraries [1] | | | | | | | | | | | | |
| 69 | Average number of volumes [1] | | | | | | | | | | | | |
| 70 | Circulating libraries used [1] | | | | | | | | | | | | |
| 71 | Enrolled in high school | 22 | 64 | 98 | 169 | 53 | 75 | 151 | 101 | 73 | 39 | 91 | 57 |
| 72 | Enrolled in high school from every 100 of population 6 to 20 years of age | 0.46 | 1.43 | 1.30 | 3.45 | 1.96 | 0.73 | 1.98 | 0.94 | 1.93 | 1.56 | 0.83 | 1.26 |

[1] No data.

### *School statistics of North Carolina and South Carolina.*

[The mountain counties are in *italic*.]

| | | North Carolina—continued. | | | | | South Carolina. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *Avery* County. | Caldwell County. | *Mitchell* County. | *Watauga* County. | [1] Group. | Entire State. | Cherokee County. | Greenville County. | *Oconee* County. | Pickens County. | Spartanburg County. |
| | Population: | | | | | | | | | | | |
| 1 | Total | ........ | 20,579 | 17,245 | 13,556 | ........ | 1,515,400 | 26,179 | 68,377 | 27,337 | 25,422 | 83,465 |
| 2 | White | ........ | 18,163 | 16,902 | 13,289 | ........ | 679,161 | 17,669 | 47,515 | 20,489 | 19,992 | 57,048 |
| 3 | Colored | ........ | 2,416 | 343 | 246 | ........ | 835,843 | 8,510 | 20,861 | 6,848 | 5,430 | 26,410 |
| 4 | Per cent colored | ........ | 11.7 | 2.0 | 1.8 | ........ | 55.2 | 32.5 | 30.5 | 25.1 | 21.4 | 31.6 |
| 5 | Foreign white | ........ | 14 | 17 | 1 | ........ | 6,054 | 26 | 312 | 84 | 13 | 542 |
| 6 | Per cent foreign white | ........ | 0.1 | 0.1 | ........ | ........ | 0.4 | 0.1 | 0.5 | 0.3 | 0.1 | 1.0 |
| 7 | Native whites of native parentage | ........ | 18,104 | 16,854 | 13,278 | ........ | 661,970 | 17,580 | 46,747 | 20,221 | 19,946 | 56,536 |
| 8 | Per cent of native parentage | ........ | 88.0 | 97.7 | 97.9 | ........ | 43.7 | 67.2 | 68.4 | 74.0 | 78.5 | 67.7 |
| 9 | Urban | ........ | 3,364 | ........ | ........ | ........ | 224,832 | 4,767 | 15,741 | ........ | 2,983 | 17,517 |
| 10 | Rural | ........ | 17,215 | 17,245 | 13,556 | ........ | 1,290,568 | 21,412 | 52,636 | 27,337 | 22,439 | 65,948 |
| 11 | Of largest city or village | ........ | 3,364 | 416 | 261 | ........ | 58,833 | 4,767 | 15,741 | 1,595 | 2,983 | 17,517 |
| 12 | Rural, per square mile | ........ | 33.6 | 46.5 | 39.6 | ........ | 42.3 | 57.4 | 69.2 | 42.1 | 42.4 | 86.2 |
| 13 | Area, square miles | ........ | 512 | 371 | 342 | 1,225 | 30,495 | 373 | 761 | 650 | 529 | 765 |
| 14 | Average area (square miles) to each white school | ........ | ........ | ........ | ........ | 5.3 | 11.5 | 6.1 | 6.0 | 8.5 | 8.5 | 5.2 |
| 15 | Number of white schools | 45 | 72 | 46 | 64 | 227 | 2,635 | 61 | 126 | 76 | 62 | 146 |
| 16 | Schools necessary to provide one for each 12 square miles | ........ | ........ | ........ | ........ | 203 | 2,542 | 32 | 64 | [illegible] | 45 | 64 |
| 17 | Population 6 to 20 years of age to each school | ........ | ........ | ........ | ........ | 77 | 111 | 106 | 133 | [illegible] | 104 | 135 |
| 18 | Population 6 to 20 years of age to each 12 square miles | ........ | ........ | ........ | ........ | 93 | 221 | 308 | 383 | [illegible] | 208 | 479 |
| 19 | Number of one-teacher schools | 38 | 70 | 37 | 55 | ........ | 1,990 | 80 | 151 | [illegible] | 73 | 156 |
| 20 | Per cent of one-teacher schools | 77.6 | 89.8 | 74.0 | 80.9 | ........ | 39.2 | 86.9 | 82.0 | 83.1 | 81.1 | 69.0 |
| 21 | Population 10 years of age and over | ........ | 14,422 | 11,797 | 9,501 | ........ | 1,078,161 | 18,274 | 49,157 | 19,168 | 17,587 | 59.419 |
| 22 | Illiterate | ........ | 2,689 | 2,685 | 1,434 | ........ | [2] 276,980 | 4,376 | 8,776 | 3,693 | 3,476 | 12,644 |
| 23 | Per cent of illiterate | ........ | 18.6 | 22.8 | 15.1 | ........ | 25.7 | 23.9 | 17.9 | 19.3 | 19.8 | 21.3 |
| 24 | Native white 10 years of age and over | ........ | 12,751 | 11,519 | 9,311 | ........ | 487,909 | 12,451 | 34,004 | 14,301 | 13,805 | 40.594 |
| 25 | Illiterate | ........ | 2,130 | 2,575 | 1,375 | ........ | 50,245 | 2,024 | 3,792 | 2,212 | 2,023 | 5,801 |
| 26 | Per cent of illiterate | ........ | 16.7 | 22.4 | 14.8 | ........ | 10.3 | 16.3 | 11.2 | 15.5 | 14.7 | 14.3 |
| 27 | Population 10 to 20 years of age | ........ | 5,242 | 4,482 | 3,596 | ........ | 399,157 | 6,936 | 17,509 | 7,217 | 6,548 | 21,860 |
| 28 | Illiterate | ........ | 582 | 487 | 263 | ........ | 76,113 | 1,275 | 2,366 | 1,023 | 1,149 | 3,564 |
| 29 | Per cent of illiterate | ........ | 11.1 | 10.9 | 7.3 | ........ | 19.1 | 18.4 | 13.5 | 14.2 | 17.5 | 16.3 |
| 30 | Population 6 to 20 years of age | ........ | 7,465 | 6,412 | 5,108 | 18,985 | 564,260 | 9,865 | 24,523 | 10,243 | 9,398 | 30,712 |
| 31 | School enrollment (public) | 2,750 | 4,777 | 2,562 | 3,334 | 13,423 | 331,587 | 6,080 | 15,930 | 6,905 | 6,116 | 20,548 |
| 32 | Number enrolled from each 100 of 6 to 20 years of age | ........ | ........ | ........ | ........ | 70.7 | 58.7 | 61.6 | 64.9 | 67.4 | 65.0 | 66.9 |
| 33 | White enrollment | 2,694 | 4,219 | 2,530 | 3,274 | ........ | 156,280 | 4,116 | 10,680 | 5,031 | 4,731 | 13,284 |
| 34 | Colored enrollment | 56 | 558 | 32 | 60 | ........ | 175,307 | 1,964 | 5,250 | 1,874 | 1,385 | 7,264 |
| 35 | Number of private schools [1] | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 36 | Private-school enrollment, elementary and high school [3] | | | | | | | | | | | |
| 37 | Public and private school enrollment [3] | | | | | | | | | | | |
| 38 | Per cent enrolled in private schools [3] | | | | | | | | | | | |
| | PUBLIC SCHOOLS. | | | | | | | | | | | |
| 39 | Average attendance | 2,088 | 3,207 | 1,590 | 2,113 | 8,998 | 217,011 | 3,633 | 11,455 | 3,726 | 3,726 | 11,861 |
| 40 | White | 2,049 | 2,821 | 1,566 | 2,072 | | 102,978 | 2,518 | 7,781 | 2,766 | 2,873 | 7,574 |
| 41 | Colored | 39 | 386 | 24 | 41 | | 114,033 | 1,115 | 3,674 | 960 | 853 | 4,287 |
| 42 | Number attending daily in each 100 enrolled | 75.9 | 67.1 | 62.0 | 63.3 | 67.0 | 65.4 | 59.7 | 71.2 | 53.9 | 60.9 | 57.7 |
| 43 | White | 76.0 | 66.8 | 61.9 | 63.2 | | 65.0 | 61.0 | 72.0 | 54.0 | 60.0 | 57.0 |
| 44 | Colored | 69.6 | 69.1 | 75.0 | 68.3 | | 65.0 | 56.0 | 69.0 | 51.0 | 61.0 | 58.0 |
| 45 | Number attending daily in each 100 of 6 to 20 years of age | | | | | 47.3 | 38.3 | 36.7 | 46.2 | 36.3 | 39.5 | 38.6 |
| 46 | Length of session, in days | 82.9 | 109.0 | 101.6 | 80.0 | 95.1 | 98.5 | 89.5 | 87.0 | 87.0 | 85.5 | 98.5 |
| 47 | Number of days each child enrolled attended | 62.9 | 73.1 | 62.9 | 50.6 | 63.7 | 64.4 | 53.4 | 62.3 | 46.8 | 52.0 | 56.8 |
| 48 | Number of days each child 6 to 20 years of age attended | | | | | 44.9 | 37.7 | 32.8 | 40.1 | 31.5 | 33.7 | 38.0 |
| 49 | Number of teachers | 57 | 113 | 60 | 114 | | 7,123 | 126 | 290 | 152 | 124 | 382 |
| 50 | Enrollment per teacher | 48 | 42 | 43 | 39 | | 40 | 48 | 54 | 45 | 49 | 53 |
| 51 | Teachers' salaries | $7,112 | $19,831 | $7,499 | $6,447 | $40,889 | $1,766,367 | $30,959 | $70,022 | $31,550 | $30,230 | $97,613 |
| 52 | Average annual salary | $124 | $175 | $124 | $56 | | $247 | $245 | $241 | $207 | $243 | $255 |
| 53 | Teachers with normal training | 9 | 76 | 23 | 49 | | (3) | (3) | (3) | (3) | (3) | (3) |
| 54 | Per cent of teachers with normal training | 15.7 | 67.2 | 38.3 | 42.9 | | (3) | (3) | (3) | (3) | (3) | (3) |
| 55 | Teachers holding third-grade certificates | 1 | | | | | 622 | 6 | 33 | 17 | 2 | 28 |
| 56 | Per cent of teachers holding third-grade certificates | 1.7 | | | | | 8.7 | 4.7 | 11.3 | 11.1 | 1.6 | 13.0 |
| 57 | Total school expenditures | $9,980 | $30,484 | $10,877 | $8,281 | $59,622 | $2,380,714 | $37,024 | $80,127 | $42,719 | $36,050 | $148,932 |
| 58 | Amount received from State | $4,216 | $3,106 | $2,201 | $2,348 | | $136,961 | $2,073 | $4,867 | $5,403 | $3,645 | $7,786 |
| 59 | Per cent received from State | 42.2 | 10.1 | 20.2 | 28.3 | | 5 | 5 | 6 | 12 | 10 | 5 |
| 60 | Expenditure per child enrolled | $3.62 | $6.38 | $4.24 | $2.48 | $4.44 | $7.17 | $6.08 | $5.02 | $6.18 | $5.89 | $7.24 |
| 61 | Expenditure per child 6 to 20 years of age | | | | | $3.14 | $4.20 | $3.74 | $3.25 | $4.16 | $3.82 | $4.84 |
| 62 | Per cent of expenditures used for teachers' salaries | 71.2 | 65.0 | 68.9 | 77.8 | 68.5 | 74.1 | 83.6 | 87.3 | 73.8 | 83.8 | 65.5 |
| 63 | Tuition per child enrolled | $2.57 | $4.14 | $2.92 | $1.92 | $3.04 | $5.31 | $5.08 | $4.38 | $4.56 | $4.93 | $4.74 |
| 64 | Tuition per child 6 to 20 years of age | | | | | $2.15 | $3.11 | $3.12 | $2.83 | $3.07 | $3.20 | $3.17 |
| 65 | Value of school buildings | $10,275 | $56,315 | $12,615 | $20,000 | | $4,474,824 | $75,760 | $182,620 | $96,100 | $76,210 | $363,465 |
| 66 | Average value of school building | $218 | $696 | $341 | $312 | | $1,057 | $851 | $1,313 | $865 | $918 | $1,986 |
| 67 | Number of school libraries [3] | | | | | | | | | | | |
| 68 | Number of volumes in libraries [3] | | | | | | | | | | | |
| 69 | Average number of volumes [3] | | | | | | | | | | | |
| 70 | Circulating libraries used [3] | | | | | | | | | | | |
| 71 | Enrolled in high school | | 38 | 21 | 62 | 121 | 8,902 | (3) | (3) | (3) | (3) | (3) |
| 72 | Enrolled in high school from every 100 of population 6 to 20 years of age | (3) | (3) | (3) | (3) | .63 | 1.57 | (3) | (3) | (3) | (3) | (3) |

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[1] Of the four preceding counties.

[2] Chiefly negroes.

[3] No data.

## *School statistics of Tennessee.*

[The mountain counties are in *italic*.]

| | | Entire State. | Anderson County. | *Bledsoe County.* | *Blount County.* | Bradley County. | Campbell County. | *Carter County.* | *Claiborne County.* | *Clay County.* | Cocke County. | *Cumberland County.* | De Kalb County. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Population: | | | | | | | | | | | | |
| 1 | Total | 2,184,789 | 17,717 | 6,329 | 20,809 | 16,336 | 27,387 | 19,838 | 23,504 | 9,009 | 19,399 | 9,327 | 15,434 |
| 2 | White | 1,711,432 | 16,796 | 5,938 | 19,584 | 14,610 | 25,473 | 19,178 | 22,684 | 8,720 | 18,348 | 9,264 | 14,599 |
| 3 | Colored | 473,088 | 921 | 391 | 1,221 | 1,717 | 1,887 | 660 | 819 | 289 | 1,051 | 63 | 835 |
| 4 | Per cent of colored | 21.7 | 5.2 | 6.2 | 5.9 | 10.5 | 6.9 | 3.3 | 3.5 | 3.2 | 5.4 | 0.7 | 5.4 |
| 5 | Foreign white | 18,459 | 61 | 13 | 38 | 60 | 335 | 16 | 193 | 1 | 16 | 42 | 64 |
| 6 | Per cent of foreign white | 0.8 | 0.3 | 0.2 | 0.2 | 0.4 | 1.2 | 0.1 | 0.8 | .......... | 0.1 | 0.5 | 0.3 |
| 7 | Native white of native parentage | 1,654,606 | 16,585 | 5,898 | 19,455 | 14,420 | 24,804 | 19,132 | 22,388 | 8,713 | 18,284 | 9,117 | 14,586 |
| 8 | Per cent of native white of native parentage | 75.7 | 93.6 | 93.2 | 93.5 | 88.3 | 90.6 | 96.4 | 95.3 | 96.7 | 94.3 | 97.7 | 94.5 |
| 9 | Urban | 441,045 | .......... | .......... | .......... | 5,549 | 2,816 | .......... | .......... | .......... | .......... | .......... | .......... |
| 10 | Rural | 1,743,779 | 17,717 | 6,329 | 20,809 | 10,787 | 24,571 | 19,838 | 23,504 | 9,009 | 19,399 | 9,327 | 15,434 |
| 11 | Of largest city or village | 131,105 | 1,102 | .......... | 2,381 | 5,549 | 2,816 | 2,478 | 886 | 467 | 2,003 | 763 | .......... |
| 12 | Rural per square mile | 41.8 | 52.6 | 16.2 | 36.4 | 32.1 | 53.0 | 56.2 | 50.2 | 35.5 | 45.4 | 14.2 | 49.6 |
| 13 | Area, square miles | 41,687 | 337 | 391 | 571 | 336 | 461 | 353 | 468 | 254 | 427 | 655 | 311 |
| 14 | Average area (square miles) per white school | 7.2 | 5.1 | 10.5 | 6.2 | 7.8 | 4.9 | 5.5 | 5.3 | 5.9 | 5.0 | 11.2 | 4.5 |
| 15 | Number of white schools | 5,750 | 65 | 37 | 91 | 43 | 93 | 64 | [1] 88 | 43 | 85 | 58 | 69 |
| 16 | Schools necessary to provide one for each 12 square miles | 3,474 | 29 | 33 | 48 | 38 | 39 | 30 | 39 | 22 | 46 | 55 | 26 |
| 17 | Population 6 to 20 years of age per school | 122 | 90 | 53 | 73 | 116 | 101 | 104 | 92 | 72 | 76 | 56 | 70 |
| 18 | Population 6 to 20 years of age for each 12 square miles | 212 | 223 | 66 | 154 | 149 | 255 | 240 | 225 | 145 | 253 | 60 | 209 |
| 19 | Number of one-teacher schools, white and colored | 5,283 | 53 | 33 | 88 | 41 | 72 | 45 | .......... | 37 | 75 | 53 | 52 |
| 20 | Per cent of one-teacher schools | 65.7 | 73.6 | 80.4 | 87.1 | 83.6 | 73.4 | 65.2 | .......... | 84.0 | 81.5 | 89.8 | 67.5 |
| 21 | Population 10 years of age and over | 1,621,179 | 12,584 | 4,421 | 14,890 | 12,074 | 18,929 | 13,797 | 16,376 | 6,189 | 13,529 | 6,442 | 11,025 |
| 22 | Illiterate | 221,071 | 1,858 | 651 | 1,622 | 1,405 | 3,025 | 2,547 | 2,878 | 1,046 | 2,790 | 696 | 1,811 |
| 23 | Per cent of illiterate | 13.6 | 14.8 | 14.7 | 10.9 | 11.6 | 16.0 | 18.5 | 17.6 | 16.9 | 20.6 | 10.8 | 16.4 |
| 24 | Native white 10 years of age and over | 1,242,319 | 11,814 | 4,128 | 13,927 | 10,727 | 17,103 | 13,323 | 15,623 | 5,987 | 12,753 | 6,357 | 10,397 |
| 25 | Illiterate | 120,966 | 1,699 | 565 | 1,431 | 1,077 | 2,567 | 2,448 | 2,616 | 963 | 2,579 | 681 | 1,611 |
| 26 | Per cent of illiterate | 9.7 | 14.4 | 13.7 | 10.3 | 10.0 | 15.0 | 18.4 | 16.7 | 16.1 | 20.2 | 10.7 | 15.5 |
| 27 | Population 10 to 20 years of age | 526,103 | 4,604 | 1,529 | 5,195 | 4,083 | 6,900 | 5,040 | 6,114 | 2,179 | 4,920 | 2,344 | 3,841 |
| 28 | Illiterate | 42,279 | 238 | 102 | 229 | 311 | 646 | 377 | 673 | 204 | 400 | 99 | 830 |
| 29 | Per cent of illiterate | 8.0 | 5.2 | 6.7 | 4.4 | 7.6 | 9.4 | 7.5 | 11.0 | 9.4 | 8.1 | 4.2 | 8.6 |
| 30 | Population 6 to 20 years of age | 738,478 | 6,490 | 2,191 | 7,396 | 5,688 | 9,960 | 7,205 | 8,777 | 3,193 | 7,078 | 3,339 | 5,451 |
| 31 | School enrollment (public) | 539,911 | 4,370 | 1,796 | 5,557 | 3,799 | 7,331 | 5,050 | 5,533 | 2,786 | 5,736 | 2,801 | 4,644 |
| 32 | Number enrolled from each 100 of population 6 to 20 | 73.1 | 67.3 | 81.9 | 75.1 | 66.7 | 73.6 | 70.0 | 63.0 | 87.2 | 81.0 | 83.8 | 85.1 |
| 33 | White enrollment | 431,056 | 4,183 | 1,721 | 5,181 | 3,449 | 7,131 | 4,895 | 5,436 | 2,744 | 5,467 | 2,790 | 4,398 |
| 34 | Colored enrollment | 101,309 | 187 | 75 | 376 | 350 | 200 | 155 | 97 | 42 | 269 | 11 | 246 |
| 35 | Number of private schools | 104 | 1 | .......... | 1 | 2 | .......... | 1 | .......... | .......... | 1 | 3 | 1 |
| 36 | Private-school enrollment | 14,813 | 180 | .......... | 300 | 200 | .......... | 175 | .......... | .......... | 0 | 430 | 125 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 37 | Public and private school enrollment | 554,724 | 4,550 | ........ | 7,696 | 5,888 | ........ | 7,380 | ........ | ........ | ........ | 3,231 | 4,779 |
| 38 | Per cent enrolled in private schools | 2.6 | 3.9 | ........ | 3.8 | 3.3 | ........ | 2.3 | ........ | ........ | ........ | 13.3 | 2.6 |
| | PUBLIC SCHOOLS. | | | | | | | | | | | | |
| 39 | Average attendance | 368,888 | 3,193 | 1,237 | 3,649 | 2,565 | 5,432 | 3,329 | 2,443 | 1,704 | 3,688 | 2,236 | 3,450 |
| 40 | White | 299,304 | 3,033 | 1,170 | 3,336 | 2,338 | 5,287 | 3,207 | 2,376 | 1,678 | 3,535 | 2,225 | 3,262 |
| 41 | Colored | 69,293 | 160 | 67 | 313 | 237 | 145 | 122 | 67 | 26 | 154 | 11 | 188 |
| 42 | Number attending daily in each 100 enrolled | 68.3 | 73.0 | 68.8 | 65.6 | 67.5 | 74.2 | 65.9 | 44.1 | 61.1 | 64.3 | 79.8 | 74.3 |
| 43 | White | 68 | 71 | 67 | 64 | 67 | 74 | 65 | 43 | 61 | 64 | 79 | 74 |
| 44 | Colored | 68 | 85 | 89 | 83 | 67 | 72 | 78 | 69 | 61 | 57 | 100 | 76 |
| 45 | Attending daily in each 100 of population 6 to 20 | 49.9 | 49.1 | 56.3 | 49.2 | 45.0 | 54.6 | 46.1 | 27.7 | 53.2 | 52.0 | 66.8 | 63.2 |
| 46 | Length of session, in days | 130 | 107 | 95 | 126 | 141 | 98 | 126 | [1] 100 | 90 | 97 | 93 | 80 |
| 47 | Number of days each child enrolled attended | 88.7 | 78.1 | 62.0 | 88.7 | 95.1 | 72.7 | 81.0 | 44.1 | 54.9 | 62.3 | 74.2 | 59.4 |
| 48 | Number of days each child 6 to 20 years of age attended | 64.8 | 52.5 | 53.4 | 61.9 | 63.4 | 53.5 | 58.0 | 27.7 | 47.8 | 50.4 | 62.1 | 50.5 |
| 49 | Number of teachers | 11,437 | 108 | 53 | 115 | 77 | 137 | 90 | 117 | 52 | 111 | 78 | 105 |
| 50 | Enrollment per teacher | 47 | 40 | 33 | 48 | 49 | 53 | 56 | 47 | 53 | 51 | 35 | 44 |
| 51 | Teachers' salaries | $3,469,084 | $31,253 | $11,025 | $25,074 | $27,832 | $35,267 | $16,446 | [2] $15,663 | $8,160 | $19,923 | $14,190 | $15,293 |
| 52 | Average annual salary | $304 | $289 | $208 | $218 | $361 | $257 | $182 | $133 | $156 | $179 | $181 | $145 |
| 53 | Normal trained teachers | 752 | ........ | ........ | ........ | ........ | ........ | 15 | ........ | ........ | 1 | 6 | 7 |
| 54 | Per cent of teachers with normal training | 6.7 | ........ | ........ | ........ | ........ | ........ | 16.6 | ........ | ........ | 0.9 | 8.1 | 6.6 |
| 55 | Third-grade certificates issued | 7,832 | 76 | 46 | 114 | 55 | 155 | 84 | ........ | 94 | 115 | 67 | 81 |
| 56 | Per cent of third-grade certificates | 76 | 75 | 83 | 88 | 67 | 100 | 90 | ........ | 93 | 91 | 91 | 72 |
| 57 | Total school expenditures | $5,537,030 | $37,381 | $13,581 | $33,798 | $42,605 | $45,036 | $25,602 | $13,323 | $12,049 | $34,062 | $16,797 | $18,400 |
| 58 | Amount received from the State | $861,828 | $7,046 | $2,758 | $7,593 | $6,182 | $11,874 | $8,181 | $9,953 | $3,956 | $7,191 | $3,910 | $6,861 |
| 59 | Per cent received from the State | 15 | 18 | 20 | 22 | 14 | 26 | 31 | 74 | 32 | 21 | 23 | 37 |
| 60 | Expenditure per child enrolled | $10.25 | $8.55 | $7.56 | $6.08 | $11.21 | $6.14 | $5.06 | $2.40 | $4.32 | $5.93 | $5.99 | $3.96 |
| 61 | Expenditure per child 6 to 20 years of age | $7.49 | $5.75 | $6.19 | $4.56 | $7.47 | $4.51 | $3.54 | $1.51 | $3.76 | $4.80 | $5.01 | $3.36 |
| 62 | Per cent of expenditures used for teachers' salaries | 62.6 | 83.6 | 81.1 | 74.1 | 65.3 | 78.3 | 74.2 | ........ | 67.7 | 58.4 | 84.5 | 83.1 |
| 63 | Tuition per child enrolled | $6.41 | $7.14 | $6.13 | $4.50 | $7.32 | $4.80 | $3.75 | ........ | $2.92 | $3.46 | $5.06 | $3.29 |
| 64 | Tuition per child 6 to 20 years of age | $4.68 | $4.80 | $5.02 | $3.37 | $4.65 | $3.53 | $2.62 | ........ | $2.54 | $2.80 | $4.23 | $2.79 |
| 65 | Value of school buildings | $10,977,177 | $41,745 | $9,400 | $62,000 | $60,800 | $82,000 | $58,000 | $25,000 | $25,000 | $42,618 | $17,000 | $40,000 |
| 66 | Average value of school building | $1,560 | $564 | $218 | $613 | $1,240 | $987 | $878 | $274 | $500 | $513 | $309 | $579 |
| 67 | Number of school libraries | 1,378 | 45 | ........ | ........ | 34 | ........ | 14 | ........ | ........ | 7 | 25 | 2 |
| 68 | Number of volumes in libraries | 97,737 | 4,848 | ........ | ........ | 1,960 | ........ | 590 | ........ | ........ | 555 | ........ | 400 |
| 69 | Average number of volumes in a library | 70 | 107 | ........ | ........ | 57 | ........ | 42 | ........ | ........ | 79 | ........ | 200 |
| 70 | Circulating libraries | 113 | ........ | ........ | ........ | ........ | ........ | 5 | ........ | ........ | ........ | ........ | ........ |
| 71 | Enrolled in high school | 13,461 | 462 | 44 | ........ | 162 | 316 | 24 | 75 | ........ | 154 | 137 | (3) |
| 72 | Enrolled in high school in every 100 of population 6 to 20 | 1.82 | 7.11 | 2.00 | ........ | 2.84 | 3.17 | 0.33 | 0.85 | ........ | 2.17 | 4.10 | ........ |

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[1] In 1911.

[2] Considered total expenditure in country as teachers' salaries.

[3] County organized in 1912.

*School statistics of Tennessee*—Continued.

[The mountain counties are in *italic*.]

| | | *Fentress* County. | Grainger County. | *Greene* County. | *Grundy* County. | Hamblen County. | Hamilton County. | *Hancock* County. | *Hawkins* County. | James County. | Jefferson County. | *Johnson* County. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Population: | | | | | | | | | | | |
| 1 | Total | 7,446 | 13,888 | 31,083 | 8,322 | 13,650 | 89,267 | 10,778 | 23,587 | 5,210 | 17,755 | 13,191 |
| 2 | White | 7,348 | 13,404 | 29,713 | 8,163 | 12,040 | 63,239 | 10,297 | 21,782 | 4,718 | 16,116 | 12,814 |
| 3 | Colored | 98 | 483 | 1,369 | 143 | 1,610 | 26,026 | 481 | 1,805 | 492 | 1,639 | 377 |
| 4 | Per cent of colored | 1.3 | 3.5 | 4.4 | 1.7 | 11.8 | 29.2 | 4.5 | 7.7 | 9.4 | 9.2 | 2.9 |
| 5 | Foreign white | 59 | 9 | 21 | 104 | 9 | 1,863 | 33 | 13 | 8 | 20 | 7 |
| 6 | Per cent of foreign white | 0.8 | 0.1 | 0.1 | 1.2 | 0.1 | 2.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 |
| 7 | Native white of native parentage | 7,187 | 13,375 | 29.598 | 7,818 | 11,970 | 57,678 | 10,288 | 21,708 | 4,676 | 16,054 | 12,778 |
| 8 | Per cent of native white of native parentage | 96.5 | 96.3 | 95.2 | 93.9 | 87.7 | 64.6 | 95.5 | 92.0 | 89.8 | 90.4 | 96.9 |
| 9 | Urban | ......... | ......... | ......... | ......... | 4,007 | 44,604 | ......... | ......... | ......... | ......... | ......... |
| 10 | Rural | 7,446 | 13,888 | 31,083 | 8,322 | 9,643 | 44,663 | 10,778 | 23,587 | 5,210 | 17,755 | 13,194 |
| 11 | Of largest city or village | ......... | ......... | 1,920 | ......... | 4,007 | 44,604 | ......... | 1,242 | ......... | 1,328 | 592 |
| 12 | Rural per square mile | 15.3 | 45.2 | 50.7 | 22.2 | 61.0 | 109.2 | 47.3 | 48.9 | 31.6 | 56.9 | 44.9 |
| 13 | Area, square miles | 486 | 307 | 613 | 375 | 158 | 409 | 228 | 482 | 165 | 312 | 294 |
| 14 | Average area (square miles) per white school | 9.7 | 5.4 | 5.1 | 12.5 | 4.4 | 6.8 | 4.8 | 5.1 | 7.8 | 4.9 | 6.5 |
| 15 | Number of white schools | 50 | 56 | 120 | 30 | 36 | 60 | 47 | 93 | 21 | 63 | 45 |
| 16 | Schools necessary to provide one for each 12 square miles | 41 | 26 | 52 | 32 | 14 | 35 | 19 | 41 | 14 | 26 | 25 |
| 17 | Population 6 to 20 years of age per school | 52 | 78 | 86 | 95 | 100 | 322 | 81 | 84 | 72 | 88 | 103 |
| 18 | Population 6 to 20 years of age for each 12 square miles | 65 | 186 | 210 | 95 | 328 | 764 | 206 | 207 | 129 | 240 | 194 |
| 19 | Number of one-teacher schools, white and colored | 51 | 57 | 106 | 22 | 34 | 23 | 45 | 87 | 17 | 50 | 30 |
| 20 | Per cent of one-teacher schools | 100 | 91.9 | 82.1 | 69.3 | 73.9 | 27.7 | 93.7 | 86.1 | 68.0 | 70.4 | 63.8 |
| 21 | Population 10 years of age and over | 5,064 | 10,057 | 22,494 | 5,865 | 10,207 | 70,051 | 7,260 | 16,960 | 3,785 | 12,950 | 9,158 |
| 22 | Illiterate | 818 | 1,485 | 2,972 | 885 | 1,093 | 6,370 | 1,810 | 3,042 | 600 | 1,870 | 1,611 |
| 23 | Per cent of illiterate | 16.2 | 14.8 | 13.2 | 15.1 | 10.7 | 9.1 | 24.9 | 17.9 | 15.9 | 14.0 | 17.6 |
| 24 | Native white 10 years of age and over | 4,930 | 9,719 | 21,446 | 5,635 | 8,980 | 47,052 | 6,928 | 15,526 | 3,415 | 11,718 | 8,903 |
| 25 | Illiterate | 797 | 1,418 | 2,648 | 846 | 794 | 2,066 | 1,634 | 2,578 | 440 | 1,505 | 1,542 |
| 26 | Per cent of illiterate | 16.2 | 14.6 | 12.3 | 15.0 | 8.8 | 4.4 | 23.6 | 16.6 | 12.9 | 12.8 | 17.3 |
| 27 | Population 10 to 20 years of age | 1,851 | 3,408 | 7,830 | 2,163 | 3,265 | 19,621 | 2,681 | 6,010 | 1,269 | 4,445 | 3,388 |
| 28 | Illiterate | 105 | 237 | 596 | 235 | 160 | 800 | 266 | 517 | 110 | 277 | 221 |
| 29 | Per cent of illiterate | 5.7 | 7.0 | 7.6 | 10.9 | 4.9 | 4.1 | 9.9 | 8.6 | 8.7 | 6.2 | 6.5 |
| 30 | Population 6 to 20 years of age | 2,687 | 4,859 | 11,135 | 3,058 | 4,600 | 26,770 | 3,929 | 8,526 | 1,807 | 6,265 | 4,851 |
| 31 | School enrollment (public) | 2,043 | 4,247 | 7,801 | 2,214 | 3,692 | 17,437 | 3,057 | 6,466 | 1,278 | 5,643 | 3,523 |
| 32 | Number enrolled from each 100 of population 6 to 20 | 76.0 | 87.4 | 70.0 | 72.4 | 80.2 | 65.1 | 77.8 | 75.8 | 70.7 | 90.0 | 72.6 |
| 33 | White enrollment | 2,025 | 4,097 | 7,606 | 2,178 | 3,303 | 13,141 | 3,034 | 6,044 | 1,144 | 5,156 | 3,410 |
| 34 | Colored enrollment | 18 | 150 | 195 | 36 | 389 | 4,296 | 23 | 422 | 132 | 487 | 113 |
| 35 | Number of private schools | ......... | ......... | 1 | 2 | ......... | 8 | ......... | 2 | 1 | 1 | ......... |
| 36 | Private-school enrollment | ......... | ......... | 180 | 442 | ......... | 725 | ......... | 189 | 140 | 397 | ......... |
| 37 | Public and private school enrollment | ......... | ......... | 7,981 | 2,656 | ......... | 18,162 | ......... | 6,655 | 1,418 | 6,040 | ......... |
| 38 | Per cent enrolled in private schools | ......... | ......... | 2.2 | 16.6 | ......... | 3.9 | ......... | 2.8 | 9.8 | 6.5 | ......... |

| | PUBLIC SCHOOLS. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 39 | Average attendance | 1,299 | 3,344 | 5,809 | [1] 1,529 | 2,479 | 12,634 | 2,101 | 4,317 | 775 | 4,219 | 2,334 |
| 40 | White | 1,285 | 3,249 | 5,649 | [2] 1,504 | 2,253 | 9,476 | 2,084 | 4,059 | 700 | 3,810 | 2,255 |
| 41 | Colored | 14 | 95 | 160 | 25 | 226 | 3,158 | 17 | 258 | 75 | 407 | 79 |
| 42 | Number attending daily in each 100 enrolled | 63.5 | 78.3 | 74.4 | 69.9 | 67.1 | 72.4 | 69.0 | 66.7 | 60.6 | 74.7 | 66.2 |
| 43 | White | 63 | 79 | 74 | 69 | 78 | 72 | 68 | 67 | 61 | 73 | 63 |
| 44 | Colored | 77 | 63 | 82 | 69 | 58 | 73 | 73 | 61 | 57 | 83 | 69 |
| 45 | Attending daily in each 100 of population 6 to 20 | 48.2 | 68.7 | 52.0 | 50.6 | 53.8 | 47.1 | 53.6 | 50.5 | 42.8 | 58.2 | 40.8 |
| 46 | Length of session, in days | 80 | 95 | 83 | 98 | 131 | 157 | 101 | 104 | 85 | 88 | 104 |
| 47 | Number of days each child enrolled attended | 50.8 | 74.7 | 61.7 | 67.6 | 87.9 | 113.6 | 69.6 | 69.3 | 51.4 | 65.7 | 68.8 |
| 48 | Number of days each child 6 to 20 years of age attended | 38.5 | 65.2 | 43.1 | 49.5 | 70.4 | 73.9 | 54.1 | 52.5 | 36.3 | 51.2 | 42.4 |
| 49 | Number of teachers | 57 | 67 | 159 | 47 | 79 | 439 | 58 | 120 | 37 | 113 | 70 |
| 50 | Enrollment per teacher | 35 | 63 | 49 | 47 | 49 | 39 | 52 | 53 | 34 | 49 | 50 |
| 51 | Teachers' salaries | $9,997 | $13,616 | [2] $27,339 | $9,766 | [2] $21,796 | $287,582 | $9,958 | $19,873 | $7,693 | $18,679 | $14,701 |
| 52 | Average annual salary | $175 | $203 | $171 | $207 | $275 | $655 | $171 | $165 | $207 | $165 | $210 |
| 53 | Normal trained teachers | 2 | ........ | 10 | 6 | 21 | 46 | 2 | 14 | 0 | ........ | ........ |
| 54 | Per cent of teachers with normal training | 3.6 | ........ | 6.2 | 12.7 | 26.5 | 11.4 | 3.6 | 11.6 | ........ | ........ | ........ |
| 55 | Third-grade certificates issued | 76 | 68 | 184 | 41 | 40 | 224 | 47 | 103 | 34 | 83 | 56 |
| 56 | Per cent of third-grade certificates | 100 | 89 | 85 | 73 | 54 | 88 | 87 | 85 | 100 | 74 | 83 |
| 57 | Total school expenditures | $19,258 | $17,097 | $39,132 | $11,823 | $34,051 | $440,169 | $14,008 | $25,733 | $12,265 | $32,802 | $21,912 |
| 58 | Amount received from the State | $3,249 | $6,284 | $12,619 | $3,957 | $4,667 | $25,417 | $5,568 | $10,179 | $2,495 | $7,181 | $5,453 |
| 59 | Per cent received from the State | 16 | 36 | 32 | 33 | 13 | 05 | 39 | 39 | 20 | 21 | 24 |
| 60 | Expenditure per child enrolled | $9.42 | $4.02 | $5.01 | $5.34 | $9.22 | $25.24 | $4.38 | $3.97 | $9.59 | $5.81 | $6.21 |
| 61 | Expenditure per child 6 to 20 years of age | $7.15 | $3.51 | $3.50 | $3.86 | $7.39 | $16.43 | $3.40 | $3.00 | $6.78 | $5.22 | $4.50 |
| 62 | Per cent of expenditures used for teachers' salaries | 51.3 | 79.6 | 69.8 | 82.6 | 64.0 | 65.3 | 71.0 | 77.2 | 62.7 | 56.9 | 67.0 |
| 63 | Tuition per child enrolled | $4.83 | $3.19 | $3.49 | $4.41 | $5.90 | $16.48 | $3.10 | $3.06 | $6.01 | $3.30 | $4.16 |
| 64 | Tuition per child 6 to 20 years of age | $3.66 | $2.79 | $2.44 | $3.18 | $4.72 | $10.72 | $2.41 | $2.31 | $4.25 | $2.97 | $3.01 |
| 65 | Value of school buildings | $9,400 | $35,000 | $51,900 | $195,700 | $70,000 | $920,000 | $15,320 | $44,000 | $12,000 | $51,550 | $32,000 |
| 66 | Average value of school building | $195 | $660 | $402 | $6,115 | $1,521 | $11,084 | $444 | $462 | $521 | $706 | $744 |
| 67 | Number of school libraries | 1 | ........ | 4 | 5 | 16 | 25 | 23 | 24 | ........ | 14 | 3 |
| 68 | Number of volumes in libraries | 200 | ........ | 250 | ........ | 831 | 2,500 | 1,485 | 610 | ........ | 1,150 | ........ |
| 69 | Average number of volumes in a library | 200 | ........ | 62 | ........ | 15 | 100 | 64 | 25 | ........ | 81 | ........ |
| 70 | Circulating libraries | ........ | ........ | ........ | ........ | 12 | ........ | ........ | 1 | ........ | ........ | 1 |
| 71 | Enrolled in high school | 100 | ........ | ........ | ........ | 47 | 1,248 | 78 | 13 | 53 | 104 | 182 |
| 72 | Enrolled in high school in every 100 of population 6 to 20 | 3.72 | ........ | ........ | ........ | 1.01 | 4.66 | 1.98 | 0.15 | 2.93 | 1.66 | 3.75 |

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[1] In 1911.

[2] Estimated.

*School statistics of Tennessee*—Continued.

[The mountain counties are in *italic*.]

| | | Knox County. | Loudon County. | McMinn County. | *Macon County.* | *Marion County.* | Meigs County. | *Monroe County.* | *Morgan County.* | *Overton County.* | *Pickett County.* | *Polk County.* | *Putnam County.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Population:** | | | | | | | | | | | | |
| 1 | Total | 94,187 | 13,612 | 21,046 | 14,559 | 18,820 | 6,131 | 20,716 | 11,458 | 15,854 | 5,087 | 14,116 | 20,023 |
| 2 | White | 81,476 | 12,648 | 19,154 | 13,827 | 16,531 | 5,565 | 19,536 | 10,767 | 15,555 | 5,076 | 13,832 | 19,131 |
| 3 | Colored | 12,709 | 964 | 1,892 | 732 | 2,289 | 566 | 1,167 | 691 | 299 | 11 | 284 | 892 |
| 4 | Per cent colored | 13.5 | 7.1 | 9.0 | 5.0 | 12.2 | 9.2 | 5.6 | 6.0 | 1.9 | 0.2 | 2.0 | 4.5 |
| 5 | Foreign white | 1,084 | 13 | 33 | 5 | 153 | 3 | 27 | 168 | 20 | .......... | 93 | 11 |
| 6 | Per cent foreign white | 1.2 | 0.1 | 0.2 | .......... | 0.8 | .......... | 0.1 | 1.5 | 0.1 | .......... | 0.7 | 0.1 |
| 7 | Native white of native parentage | 77,895 | 12,590 | 19,036 | 13,808 | 16,072 | 5,552 | 19,461 | 10,142 | 15,494 | 5,073 | 13,622 | 19,077 |
| 8 | Per cent of native white of native parentage | 82.7 | 92.5 | 90.4 | 94.8 | 85.4 | 90.6 | 93.9 | 88.5 | 92.3 | 99.7 | 96.5 | 95.3 |
| 9 | Urban | 41,472 | 3,392 | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 10 | Rural | 52,715 | 10,220 | 21,046 | 14,559 | 18,820 | 6,131 | 20,716 | 11,458 | 15,854 | 5,087 | 14,116 | 20,023 |
| 11 | Of largest city or village | 36,346 | 3,392 | 2,264 | 678 | 2,106 | 165 | 1,850 | 858 | 1,421 | .......... | .......... | 1,848 |
| 12 | Rural, per square mile | 104.6 | 46.7 | 48.7 | 50.9 | 37.3 | 30.8 | 30.8 | 21.7 | 35.5 | 31.4 | 32.7 | 49.6 |
| 13 | Area, square miles | 504 | 219 | 432 | 286 | 504 | 199 | 673 | 529 | 446 | 162 | 432 | 404 |
| 14 | Average area (square miles) per white school | 3.9 | 4.6 | 5.4 | 4.7 | 10.5 | 6.6 | 9.1 | 9.2 | 5.4 | 5.0 | 8.6 | 5.5 |
| 15 | Number of white schools | 128 | 46 | 80 | 60 | 48 | 30 | 74 | 57 | [1] 82 | 32 | 50 | 73 |
| 16 | Schools necessary to provide one for each 12 square miles | 42 | 19 | 36 | 24 | 42 | 17 | 57 | 45 | 38 | 14 | 36 | 34 |
| 17 | Population 6 to 20 years of age per school | 193 | 89 | 88 | 80 | 113 | 61 | 94 | 66 | 66 | 57 | 91 | 89 |
| 18 | Population 6 to 20 years of age for each 12 square miles | 731 | 263 | 209 | 215 | 154 | 126 | 132 | 86 | 147 | 132 | 132 | 210 |
| 19 | Number of one-teacher schools, white and colored | 60 | 46 | 66 | 52 | 38 | 29 | 70 | 49 | .......... | 32 | 39 | 69 |
| 20 | Per cent of one-teacher schools | 47.7 | 82.1 | 77.6 | 81.2 | 66.6 | 82.8 | 87.5 | 84.4 | .......... | 100 | 75.0 | 86.2 |
| 21 | Population 10 years of age and over | 73,016 | 9,884 | 15,161 | 10,423 | 13,406 | 4,236 | 14,748 | 8,131 | 11,119 | 3,552 | 9,871 | 14,005 |
| 22 | Illiterate | 6,446 | 997 | 1,816 | 1,812 | 1,792 | 631 | 2,399 | 1,107 | 1,508 | 546 | 1,752 | 2,300 |
| 23 | Per cent of illiterate | 8.8 | 10.1 | 12.0 | 17.4 | 13.4 | 14.9 | 16.3 | 13.6 | 13.6 | 15.4 | 17.7 | 16.4 |
| 24 | Native white 10 years of age and over | 61,510 | 9,156 | 13,729 | 9,905 | 11,480 | 3,867 | 13,878 | 7,297 | 10,880 | 3,543 | 9,561 | 13,337 |
| 25 | Illiterate | 4,641 | 852 | 1,421 | 1,659 | 1,401 | 531 | 2,185 | 854 | 1,458 | 541 | 1,665 | 2,096 |
| 26 | Per cent of illiterate | 7.5 | 9.3 | 10.4 | 16.7 | 12.2 | 13.7 | 15.7 | 11.7 | 13.4 | 15.3 | 17.4 | 15.7 |
| 27 | Population 10 to 20 years of age | 22,600 | 3,610 | 5,262 | 3,636 | 4,564 | 1,442 | 5,349 | 2,699 | 3,939 | 1,291 | 3,388 | 4,992 |
| 28 | Illiterate | 1,038 | 194 | 415 | 399 | 287 | 84 | 429 | 170 | 293 | 64 | 440 | 492 |
| 29 | Per cent of illiterate | 4.6 | 5.4 | 7.9 | 11.0 | 6.3 | 5.8 | 8.0 | 6.3 | 7.4 | 5.0 | 13.0 | 9.9 |
| 30 | Population 6 to 20 years of age | 30,713 | 5,005 | 7,544 | 5,166 | 6,490 | 2,154 | 7,570 | 3,882 | 5,613 | 1,855 | 4,782 | 7,148 |
| 31 | School enrollment (public) | 21,134 | 3,474 | 5,339 | 2,814 | 5,006 | 1,796 | 5,106 | 3,082 | 4,722 | 1,340 | 3,888 | 5,447 |
| 32 | Number enrolled from each 100 of 6 to 20 years of age | 68.5 | 69.4 | 70.7 | 54.4 | 77.1 | 83.3 | 67.4 | 79.3 | 84.1 | 72.2 | 81.3 | 76.2 |
| 33 | White enrollment | 18,887 | 3,139 | 4,913 | 2,778 | 4,438 | 1,595 | 4,786 | 3,056 | 4,660 | 1,340 | 3,846 | 5,157 |
| 34 | Colored enrollment | 2,247 | 335 | 426 | 77 | 568 | 201 | 320 | 26 | 62 | .......... | 42 | 290 |
| 35 | Number of private schools | 8 | .......... | 1 | 1 | .......... | .......... | 2 | .......... | 1 | .......... | .......... | .......... |
| 36 | Private-school enrollment | 433 | .......... | 200 | 200 | .......... | .......... | 160 | .......... | 450 | .......... | .......... | .......... |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 37 | Public and private school enrollment | 21,567 | ........ | 5,539 | 2,014 | ........ | ........ | 5,266 | ........ | 5,172 | ........ | ........ | ........ |
| 38 | Per cent enrolled in private schools | 2.0 | ........ | 3.4 | 9.9 | ........ | ........ | 3.0 | ........ | 8.7 | ........ | ........ | ........ |
| | PUBLIC SCHOOLS. | | | | | | | | | | | | |
| 39 | Average attendance | 14,317 | 2,186 | 3,338 | 1,716 | 3,768 | 1,150 | 2,758 | 2,819 | 4,617 | 887 | 1,980 | 3,553 |
| 40 | White | 12,546 | 1,956 | 3,069 | 1,643 | 3,434 | 1,011 | 2,581 | 2,796 | 4,571 | 887 | 1,954 | 3,372 |
| 41 | Colored | 1,771 | 230 | 269 | 73 | 334 | 139 | 177 | 23 | 46 | ........ | 26 | 181 |
| 42 | Number attending daily in each 100 enrolled | 67.8 | 62.9 | 62.5 | 60.9 | 75.2 | 64.0 | 54.0 | 91.4 | 97.7 | 66.1 | 50.9 | 65.2 |
| 43 | White | 66 | 62 | 59 | 59.1 | 77 | 63 | 54 | 91 | 98 | 66 | 50 | 65 |
| 44 | Colored | 69 | 68 | 94 | 95.0 | 58 | 69 | 55 | 88 | 74 | ........ | 61 | 62 |
| 45 | Attending daily in each 100 of 6 to 20 years of age | 39.5 | 36.7 | 37.1 | 33.1 | 57.9 | 53.3 | 36.3 | 72.4 | 82.1 | 47.7 | 41.3 | 49.6 |
| 46 | Length of session, in days | 167 | 113 | 103 | 65 | 120 | 81 | 134 | 92 | 86 | 80 | 113 | 106 |
| 47 | Number of days each child enrolled attended | 113.2 | 70.0 | 64.3 | 37.2 | 90.2 | 51.8 | 72.3 | 84.0 | 84.0 | 52.8 | 57.5 | 69.1 |
| 48 | Number of days each child 6 to 20 years of age attended | 65.9 | 41.4 | 38.2 | 21.5 | 69.4 | 43.1 | 48.6 | 66.6 | 70.6 | 38.1 | 46.6 | 52.5 |
| 49 | Number of teachers | 415 | 86 | 101 | 72 | 94 | 42 | 109 | 77 | 89 | 32 | 70 | 101 |
| 50 | Enrollment per teacher | 50 | 40 | 52 | 25 | 53 | 42 | 46 | 40 | 53 | 41 | 38 | 53 |
| 51 | Teachers' salaries | $187,601 | $19,546 | [1] $25,956 | $8,347 | $23,482 | $6,500 | $22,440 | $13,693 | $14,082 | $4,586 | $21,403 | $21,251 |
| 52 | Average annual salary | $452 | $227 | $257 | $114 | $249 | $154 | $205 | $177 | $158 | $143 | $305 | $210 |
| 53 | Normal-trained teachers | 20 | 4 | 6 | 5 | 12 | ........ | ........ | ........ | ........ | ........ | 4 | 1 |
| 54 | Per cent of teachers with normal-school training | 5.0 | 5.2 | 6.7 | 6.9 | 13.3 | ........ | ........ | ........ | ........ | ........ | 5.7 | 0.9 |
| 55 | Third-grade certificates issued | 221 | 67 | 91 | 75 | 84 | ........ | 99 | 76 | ........ | 42 | 50 | 75 |
| 56 | Per cent of third-grade certificates | 85 | 91 | 92 | 92 | 90 | ........ | 92 | 84 | ........ | 100 | 65 | 70 |
| 57 | Total school expenditures | $279,442 | $29,161 | $26,264 | $12,716 | $41,651 | $8,041 | $36,046 | $22,123 | $16,667 | $6,810 | $33,783 | $34,160 |
| 58 | Amount received from the State | $30,032 | $5,456 | $7,171 | $6,015 | $7,233 | $2,554 | $8,405 | $3,953 | $6,799 | $2,418 | $5,121 | $8,718 |
| 59 | Per cent received from the State | 10 | 18 | 27 | 47 | 17 | 31 | 23 | 17 | 40 | 35 | 15 | 24 |
| 60 | Expenditure per child enrolled | $13.22 | $8.39 | $4.85 | $4.60 | $8.32 | $4.47 | $7.05 | $7.14 | $3.52 | $5.08 | $8.67 | $6.26 |
| 61 | Expenditure per child 6 to 20 years of age | $10.05 | $5.82 | $3.42 | $1.61 | $6.41 | $3.72 | $4.75 | $5.66 | $2.96 | $3.66 | $7.04 | $4.77 |
| 62 | Per cent of total expenditures used for teachers' salaries | 67.1 | 67.0 | 98.8 | 64.8 | 56.3 | 80.8 | 62.2 | 61.8 | 84.4 | 67.3 | 63.3 | 62.2 |
| 63 | Tuition per child enrolled | $8.87 | $5.62 | $4.79 | $2.98 | $4.68 | $3.61 | $4.38 | $4.41 | $2.97 | $3.41 | $5.48 | $3.89 |
| 64 | Tuition per child 6 to 20 years of age | $6.74 | $3.89 | $3.37 | $1.04 | $3.60 | $3.00 | $2.95 | $3.49 | $2.49 | $2.46 | $4.45 | $2.96 |
| 65 | Value of school buildings | $819,632 | $42,600 | $35,000 | $15,375 | $85,000 | $12,750 | $44,000 | $46,250 | $15,625 | $8,800 | $26,850 | $52,550 |
| 66 | Average value of school buildings | $6,023 | $426 | $432 | $247 | $1,603 | $364 | $594 | $826 | ........ | $275 | $516 | $673 |
| 67 | Number of school libraries | 164 | 41 | ........ | 3 | 10 | 7 | 5 | 13 | ........ | ........ | 44 | 5 |
| 68 | Number of volumes in libraries | 3,600 | 1,800 | ........ | ........ | 750 | 200 | 600 | ........ | ........ | ........ | 1,800 | 1,083 |
| 69 | Average number of volumes in libraries | 21 | 43 | ........ | ........ | 75 | 28 | 120 | ........ | ........ | ........ | 40 | 216 |
| 70 | Circulating libraries | 5 | ........ | ........ | ........ | ........ | ........ | 1 | ........ | ........ | ........ | ........ | ........ |
| 71 | Enrolled in high school | 954 | 329 | 316 | ........ | 142 | ........ | 69 | 11 | ........ | ........ | (2) | 58 |
| 72 | Enrolled in high school per 100 of population 6 to 20 | 3.10 | 6.57 | 4.18 | ........ | 2.18 | ........ | 0.91 | 0.28 | ........ | ........ | ........ | 0.81 |

[1] In 1911.

[2] County organized in 1912.

### *School statistics of Tennessee*—Continued.

[The mountain counties are in *italic*.]

| | | Rhea County. | Roane County. | *Scott County.* | *Sequatchie County.* | *Sevier County.* | **Sullivan County.** | Unicoi County. | Union County. | *Van Buren County.* | Warren County. | Washington County. | **White County.** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Population: | | | | | | | | | | | | |
| 1 | Total | 15,410 | 22,860 | 12,947 | 4,202 | 22,296 | 28,120 | 7,201 | 11,414 | 2,784 | 16,534 | 28,968 | 15,420 |
| 2 | White | 14,072 | 20,490 | 12,850 | 4,063 | 21,917 | 26,584 | 7,070 | 11,384 | 2,736 | 14,585 | 26,701 | 14,515 |
| 3 | Colored | 1,316 | 2,366 | 97 | 139 | 387 | 1,535 | 131 | 30 | 48 | 1,949 | 2,267 | 899 |
| 4 | Per cent colored | 8.5 | 10.3 | 0.7 | 3.3 | 1.7 | 5.5 | 1.8 | 0.3 | 1.7 | 11.8 | 7.8 | 5.8 |
| 5 | Foreign white | 70 | 123 | 40 | 4 | 7 | 81 | 2 | 2 | 1 | 33 | 528 | 77 |
| 6 | Per cent foreign white | 0.5 | 0.5 | 0.3 | 0.1 | ........ | 0.3 | ........ | ........ | ........ | 0.2 | 1.8 | 0.5 |
| 7 | Native white of native parentage | 13,830 | 20,032 | 12,717 | 4,037 | 21,897 | 26,291 | 5,051 | 11,369 | 2,727 | 14,461 | 25,784 | 14,347 |
| 8 | Per cent of native white of native parentage | 89.7 | 87.6 | 98.2 | 96.1 | 98.2 | 93.5 | 97.9 | 99.6 | 98.0 | 87.5 | 89.0 | 93.0 |
| 9 | Urban | ........ | 6,721 | ........ | ........ | ........ | 7,148 | ........ | ........ | ........ | ........ | 8,502 | ........ |
| 10 | Rural | 15,410 | 16,139 | 12,947 | 4,202 | 22,296 | 20,972 | 7,201 | 11,414 | 2,784 | 16,534 | 20,466 | 15,420 |
| 11 | Of largest city or village | 1,991 | 3,660 | ........ | 1,166 | 675 | 7,148 | 1,149 | ........ | 210 | 2,299 | 8,502 | 1,409 |
| 12 | Rural, per square mile | 42.2 | 41.6 | 23.5 | 15.9 | 38.0 | 48.1 | 35.8 | 48.6 | 9.5 | 39.1 | 63.0 | 42.5 |
| 13 | Area, square miles | 365 | 388 | 550 | 264 | 587 | 436 | 201 | 235 | 293 | 423 | 325 | 363 |
| 14 | Average area (square miles) per white school | 7.4 | 5.6 | 8.4 | 16.5 | 5.5 | 5.0 | 7.1 | 4.2 | 14.6 | 6.4 | 4.9 | 6.4 |
| 15 | Number of white schools | 49 | 69 | 65 | 16 | 106 | 87 | 28 | 56 | 20 | 66 | 66 | 56 |
| 16 | Schools necessary to provide one for each 12 square miles | 31 | 33 | 46 | 22 | 49 | 37 | 17 | 20 | 25 | 36 | 28 | 31 |
| 17 | Population 6 to 20 years of age per school | 101 | 106 | 74 | 87 | 78 | 107 | 85 | 75 | 48 | 69 | 121 | 83 |
| 18 | Population 6 to 20 years of age for each 12 square miles | 176 | 250 | 105 | 67 | 175 | 258 | 159 | 212 | 40 | 152 | 325 | 175 |
| 19 | Number of one-teacher schools, white and colored | 39 | 60 | 52 | 9 | 94 | 64 | 19 | 47 | 18 | 35 | 53 | 35 |
| 20 | Per cent of one-teacher schools | 72.2 | 76.9 | 80.0 | 52.9 | 86.2 | 71.9 | 56.6 | 83.9 | 85.7 | 44.3 | 70.6 | 53.8 |
| 21 | Population 10 years of age and over | 11,043 | 16,363 | 8,714 | 2,923 | 15,038 | 20,653 | 4,942 | 8,003 | 1,974 | 12,300 | 21,992 | 10,955 |
| 22 | Illiterate | 1,690 | 2,014 | 1,683 | 284 | 2,148 | 2,701 | 993 | 1,091 | 231 | 1,335 | 2,201 | 1,851 |
| 23 | Per cent of illiterate | 15.3 | 12.3 | 19.3 | 9.7 | 14.3 | 13.1 | 20.1 | 13.6 | 11.7 | 10.9 | 10.0 | 16.9 |
| 24 | Native white 10 years of age and over | 9,988 | 14,515 | 8,587 | 2,816 | 14,769 | 19,369 | 4,829 | 7,979 | 1,940 | 10,804 | 19,689 | 10,204 |
| 25 | Illiterate | 1,432 | 1,587 | 1,614 | 259 | 2,078 | 2,380 | 953 | 1,081 | 221 | 880 | 1,700 | 1,589 |
| 26 | Per cent of illiterate | 14.3 | 10.9 | 18.8 | 9.2 | 14.1 | 12.3 | 19.7 | 13.5 | 11.4 | 8.1 | 8.6 | 15.6 |
| 27 | Population 10 to 20 years of age | 3,884 | 5,757 | 3,329 | 104 | 5,828 | 6,729 | 1,752 | 2,952 | 721 | 3,906 | 6,483 | 3,808 |
| 28 | Illiterate | 329 | 300 | 269 | 63 | 296 | 511 | 162 | 140 | 28 | 236 | 355 | 450 |
| 29 | Per cent of illiterate | 8.5 | 5.2 | 8.1 | 6.0 | 5.1 | 7.6 | 9.2 | 4.7 | 3.9 | 6.0 | 5.5 | 11.8 |
| 30 | Population 6 to 20 years of age | 5,486 | 8,275 | 4,872 | 1,495 | 8,605 | 9,580 | 2,550 | 4,245 | 1,016 | 5,490 | 9,101 | 5,425 |
| 31 | School enrollment (public) | 4,226 | 6,547 | 4,628 | 1,073 | 7,263 | 7,175 | 2,270 | 3,147 | 918 | 4,417 | 6,574 | 4,088 |
| 32 | Number enrolled from each 100 of 6 to 20 years of age | 77.0 | 79.1 | 94.9 | 71.8 | 84.4 | 60.2 | 89.0 | 74.1 | 90.3 | 80.4 | 72.2 | 75.3 |
| 33 | White enrollment | 3,887 | 5,887 | 4,628 | 1,058 | 7,167 | 6,987 | 2,261 | 3,147 | 900 | 3,964 | 6,045 | 3,839 |
| 34 | Colored enrollment | 339 | 670 | ........ | 15 | 96 | 188 | 9 | ........ | 18 | 453 | 529 | 249 |
| 35 | Number of private schools | ........ | ........ | ........ | ........ | 1 | ........ | ........ | ........ | 1 | 2 | ........ | 2 |
| 36 | Private-school enrollment | ........ | ........ | ........ | ........ | 225 | ........ | ........ | ........ | 225 | 293 | ........ | 500 |
| 37 | Public and private school enrollment | ........ | ........ | ........ | ........ | 7,488 | ........ | ........ | ........ | 1,143 | 4,710 | ........ | 4.588 |
| 38 | Per cent enrolled in private schools | ........ | ........ | ........ | ........ | 3.0 | ........ | ........ | ........ | 19.6 | 6.2 | ........ | 10.8 |

| | PUBLIC SCHOOLS. | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 39 | Average attendance | 2,606 | 4,850 | 4,229 | 779 | 4,982 | 4,457 | 2,060 | 2,259 | 785 | 3,212 | 4,446 | 2,744 |
| 40 | White | 2,375 | 4,384 | 4,229 | 767 | 4,922 | 4,341 | 2,051 | 2,259 | 775 | 2,910 | 4,062 | 2,544 |
| 41 | Colored | 231 | 466 | .......... | 12 | 60 | 116 | 9 | .......... | 10 | 302 | 384 | 160 |
| 42 | Number attending daily in each 100 enrolled | 61.6 | 74.0 | 91.3 | 72.6 | 68.5 | 62.1 | 90.7 | 71.1 | 85.5 | 72.7 | 67.6 | 67.1 |
| 43 | White | 61 | 74 | 91 | 72 | 68 | 62 | 90 | 71 | 86 | 73 | 67 | 66 |
| 44 | Colored | 68 | 69 | .......... | 80 | 62 | 61 | 100 | .......... | 55 | 66 | 72 | 64 |
| 45 | Attending daily in each 100 of 6 to 20 years of age | 47.4 | 58.5 | 86.6 | 52.1 | 57.8 | 87.3 | 80.7 | 52.6 | 77.2 | 58.4 | 48.8 | 50.5 |
| 46 | Length of session, in days | 138 | 117 | 100 | 90 | 98 | 132 | 108 | 100 | 91 | 119 | 155 | 112 |
| 47 | Number of days each child enrolled attended | 85.0 | 86.5 | 91.3 | 65.3 | 67.1 | 81.9 | 97.9 | 71.1 | 77.8 | 86.5 | 104.7 | 75.1 |
| 48 | Number of days each child 6 to 20 years of age attended | 65.4 | 68.4 | 86.6 | 46.8 | 56.6 | 49.1 | 87.2 | 52.6 | 70.2 | 69.4 | 75.6 | 56.5 |
| 49 | Number of teachers | 87 | 138 | 93 | 27 | 120 | 118 | 87 | 65 | 24 | 108 | 169 | 110 |
| 50 | Enrollment per teacher | 48 | 43 | 49 | 39 | 60 | 48 | 61 | 48 | 38 | 40 | 38 | 37 |
| 51 | Teachers' salaries | $22,641 | $36,630 | $16,155 | $4,160 | $23,394 | $43,182 | $7,674 | $11,232 | $3,420 | $22,709 | $64,767 | $16,819 |
| 52 | Average annual salary | $260 | $264 | $173 | $154 | $194 | $365 | $207 | $172 | $142 | $210 | $383 | $152 |
| 53 | Normal-trained teachers | 3 | .......... | 9 | .......... | .......... | 12 | .......... | 2 | .......... | 14 | 3 | 12 |
| 54 | Per cent of teachers with normal-school training | 3.7 | .......... | 10.7 | .......... | .......... | 10.1 | .......... | 3.0 | .......... | 12.9 | 1.9 | 11.5 |
| 55 | Third-grade certificates issued | 65 | 105 | 98 | 30 | 121 | 74 | 31 | 47 | 38 | 68 | 61 | 75 |
| 56 | Per cent of third-grade certificates | 78 | 86 | 96 | 93 | 100 | 81 | 70 | 73 | 100 | 59 | 57 | 75 |
| 57 | Total school expenditures | $35,259 | $46,642 | $25,746 | $7,536 | $28,094 | $54,398 | $8,998 | $12,890 | $6,716 | $30,852 | $93,032 | $32,975 |
| 58 | Amount received from the State | $6,880 | $8,703 | $5,826 | $1,942 | $9,373 | $9,401 | $3,080 | $5,321 | $1,694 | $6,468 | $9,672 | $6,402 |
| 59 | Per cent received from the State | 19 | 18 | 22 | 25 | 33 | 17 | 34 | 41 | 25 | 20 | 10 | 19 |
| 60 | Expenditure per child enrolled | $8.34 | $7.09 | $5.56 | $7.02 | $3.86 | $9.42 | $3.96 | $4.09 | $7.31 | $6.98 | $14.15 | $8.06 |
| 61 | Expenditure per child 6 to 20 years of age | $6.42 | $5.60 | $5.27 | $5.04 | $3.25 | $5.67 | $3.52 | $3.03 | $6.60 | $5.61 | $10.21 | $6.06 |
| 62 | Per cent of total expenditures used for teachers' salaries | 64.2 | 78.5 | 62.7 | 55.2 | 83.2 | 79.3 | 85.2 | 87.1 | 50.9 | 73.5 | 69.6 | 51.0 |
| 63 | Tuition per child enrolled | $5.35 | $5.56 | $3.48 | $3.87 | $3.21 | $7.47 | $3.37 | $3.56 | $3.72 | $5.13 | $9.84 | $4.11 |
| 64 | Tuition per child 6 to 20 years of age | $4.12 | $4.39 | $3.30 | $2.78 | $2.70 | $4.51 | $2.99 | $2.63 | $3.35 | $4.12 | $7.10 | $3.09 |
| 65 | Value of school buildings | $63,000 | $59,000 | $27,000 | $15,000 | .......... | $52,500 | $20,000 | $22,300 | $9,200 | $43,400 | $192,800 | $38,000 |
| 66 | Average value of school buildings | $1,188 | $797 | $415 | $882 | .......... | $589 | $714 | $398 | $438 | $556 | $2,836 | $633 |
| 67 | Number of school libraries | 13 | 5 | 5 | .......... | 26 | 21 | 2 | .......... | 4 | 7 | 16 | 36 |
| 68 | Number of volumes in libraries | 600 | 1,380 | 400 | .......... | .......... | 675 | 616 | .......... | 300 | 700 | 2,140 | 3,200 |
| 69 | Average number of volumes in libraries | 46 | 276 | 80 | .......... | .......... | 32 | 308 | .......... | 75 | 100 | 133 | 88 |
| 70 | Circulating libraries | 6 | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 71 | Enrolled in high school | 163 | 185 | 28 | .......... | .......... | .......... | 10 | .......... | .......... | 65 | 436 | 150 |
| 72 | **Enrolled in high school per 100 of population 6 to 20** | 2.99 | 2.23 | 0.57 | .......... | .......... | .......... | 0.39 | .......... | .......... | 1.18 | 4.79 | 2.76 |

### *School statistics of Virginia.*

[Mountain counties are in *italic*.]

| | | Entire State. | Alle-ghany County. | *Amherst* County. | Augusta County. | Bath County. | Bedford County. | *Bland* County. | Bote-tourt County. | *Buch-anan* County. | *Carroll* County. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Population: | | | | | | | | | | |
| 1 | Total | 2,061,612 | 19,921 | 18,932 | 43,049 | 6,538 | 29,549 | 5,154 | 17,727 | 12,334 | 21,116 |
| 2 | White | 1,389,809 | 15,880 | 11,460 | 36,026 | 5,362 | 21,094 | 5,021 | 14,232 | 12,330 | 20,843 |
| 3 | Colored | 671,096 | 4,037 | 7,465 | 7,017 | 1,176 | 8,455 | 133 | 3,495 | 4 | 268 |
| 4 | Per cent colored | 32.6 | 20.3 | 39.4 | 16.3 | 18.0 | 28.6 | 2.6 | 19.7 | .......... | 1.3 |
| 5 | Foreign white | 26,628 | 296 | 85 | 204 | 115 | 86 | 5 | 53 | 10 | 8 |
| 6 | Per cent foreign white | 1.3 | 1.5 | 0.4 | 0.5 | 1.8 | 0.3 | 0.1 | 0.3 | 0.1 | .......... |
| 7 | Native white of native parentage | 1,325,238 | 15,171 | 11,238 | 35,256 | 5,156 | 20,825 | 5,001 | 14,068 | 12,312 | 20,806 |
| 8 | Per cent native white of native parentage | 64.3 | 76.2 | 59.4 | 81.9 | 78.9 | 70.5 | 97.0 | 79.4 | 99.8 | 98.5 |
| 9 | Urban | 476,529 | 9,982 | .......... | 10,604 | .......... | 2,508 | .......... | .......... | .......... | .......... |
| 10 | Rural | 1,585,083 | 9,939 | 18,932 | 32,445 | 6,538 | 27,041 | 5,154 | 17,727 | 12,334 | 21,116 |
| 11 | Of largest city or village | 127,628 | 4,234 | 618 | 1,632 | .......... | 2,508 | .......... | 792 | 264 | 755 |
| 12 | Rural, per square mile | 39.4 | 21.7 | 40.3 | 32.3 | 12.0 | 34.2 | 14.3 | 32.3 | 24.0 | 46.1 |
| 13 | Area, square miles | 40,262 | 458 | 470 | 1,006 | 545 | 791 | 360 | 548 | 514 | 458 |
| 14 | Average area (square miles) to each white school | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 15 | Number of white schoolrooms | 8,309 | 86 | 77 | 238 | 44 | 146 | 39 | 103 | 72 | 110 |
| 16 | Schools necessary to provide one for each 12 square miles | 3,356 | 38 | 40 | 93 | 46 | 66 | 30 | 46 | 43 | 39 |
| 17 | Population 6 to 20 years of age per school | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 18 | Population 6 to 20 years of age per 12 square miles | 207 | 170 | 170 | 144 | 46 | 162 | 62 | 137 | 114 | 204 |
| 19 | Number of one-teacher schools | 5,031 | 38 | 73 | 86 | 33 | 125 | 31 | 54 | 62 | 90 |
| 20 | Per cent of one-teacher schools | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 21 | Population 10 years of age and over | 1,536,297 | 14,684 | 13,506 | 33,337 | 4,905 | 21,533 | 3,777 | 12,968 | 7,958 | 14,602 |
| 22 | Illiterate | 232,911 | 1,481 | 2,761 | 2,750 | 476 | 3,420 | 386 | 1,280 | 2,723 | 2,474 |
| 23 | Per cent of illiterate | 15.2 | 10.1 | 20.4 | 8.2 | 9.7 | 15.9 | 10.2 | 9.9 | 34.2 | 16.9 |
| 24 | Native white 10 years of age and over | 1,013,694 | 11,234 | 8,242 | 27,677 | 3,846 | 15,398 | 3,679 | 10,365 | 7,944 | 14,408 |
| 25 | Illiterate | 81,457 | 612 | 569 | 1,396 | 270 | 1,191 | 354 | 660 | 2,721 | 2,406 |
| 26 | Per cent of illiterate | 8.0 | 5.4 | 5.0 | 5.0 | 7.0 | 7.7 | 9.6 | 6.4 | 34.3 | 16.7 |
| 27 | Population 10 to 20 years of age | 494,292 | 4,507 | 4,791 | 9,701 | 1,524 | 7,518 | 1,365 | 4,433 | 3,312 | 5,471 |
| 28 | Illiterate | 46,831 | 300 | 730 | 480 | 121 | 767 | 88 | 288 | 734 | 539 |
| 29 | Per cent of illiterate | 9.5 | 6.7 | 15.2 | 4.9 | 7.9 | 10.2 | 6.4 | 6.5 | 22.2 | 9.9 |
| 30 | Population 6 to 20 years of age | 697,649 | 6,487 | 6,836 | 13,477 | 2,131 | 10,723 | 1,885 | 6,316 | 4,916 | 7,981 |
| 31 | School enrollment (public) | 409,825 | 3,895 | 3,410 | 8,345 | 1,306 | 6,969 | 1,274 | 4,031 | 3,440 | 5,042 |
| 32 | Number enrolled from every 100 of 6 to 20 years of age | 58.6 | 60.0 | 49.8 | 61.9 | 61.2 | 64.9 | 67.5 | 63.8 | 69.9 | 63.1 |
| 33 | White enrollment | 292,808 | 3,274 | 2,217 | 7,114 | 1,143 | 5,089 | 1,256 | 3,229 | 3,440 | 5,013 |
| 34 | Colored | 117,017 | 621 | 1,193 | 1,231 | 163 | 1,880 | 18 | 802 | .......... | 29 |
| 35 | Number of private schools | 188 | 1 | 1 | 7 | .......... | 2 | .......... | 1 | .......... | .......... |
| 36 | Enrolled in private schools, elementary and high | 16,417 | 143 | 202 | 1,254 | .......... | 329 | .......... | .......... | .......... | .......... |
| 37 | Public and private school enrollment | 426,242 | 4,038 | 3,612 | 9,599 | .......... | 7,298 | .......... | .......... | .......... | .......... |
| 38 | Per cent enrolled in private schools | 3.8 | 3.5 | 5.5 | 14.1 | .......... | 4.5 | .......... | .......... | .......... | .......... |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | PUBLIC SCHOOLS. | | | | | | | | | | |
| 39 | School attendance | 264,835 | 3,212 | 1,916 | 5,677 | 838 | 4,151 | 829 | 2,544 | 1,888 | 2,892 |
| 40 | White | 193,888 | 2,743 | 1,276 | 4,817 | 748 | 3,059 | 821 | 2,030 | 1,888 | 2,878 |
| 41 | Colored | 70,947 | 469 | 640 | 860 | 90 | 1,092 | 8 | 514 | .......... | 14 |
| 42 | Attending daily from every 100 enrolled | 64.6 | 82.4 | 56.1 | 68.0 | 64.1 | 59.5 | 65.0 | 63.1 | 54.8 | 57.3 |
| 43 | White | 66.2 | 83.7 | 57.5 | 67.7 | 65.4 | 60.1 | 65.3 | 62.8 | 54.8 | 57.4 |
| 44 | Colored | 60.6 | 75.5 | 53.6 | 69.7 | 55.1 | 57.5 | 44.4 | 64.0 | .......... | 48.2 |
| 45 | Attending daily from every 100 of population 6 to 20 | 37.8 | 49.4 | 27.9 | 42.0 | 39.2 | 39.0 | 43.8 | 40.2 | 38.3 | 36.1 |
| 46 | Length of session, in days | 134 | 147 | 111 | 130 | 104 | 117 | 96 | 124 | 108 | 96 |
| 47 | Days each child enrolled attended | 86.5 | 121.1 | 62.2 | 87.0 | 66.6 | 69.6 | 62.4 | 78.2 | 59.1 | 55.0 |
| 48 | Days each child 6 to 20 years of age attended | 50.6 | 72 6 | 30.9 | 53.7 | 40.7 | 45.6 | 42.0 | 49.8 | 41.3 | 34.6 |
| 49 | Teachers | 10,778 | 99 | 110 | 275 | 51 | 194 | 40 | 126 | 72 | 112 |
| 50 | Enrollment per teacher | 38 | 39 | 31 | 30 | 25 | 35 | 31 | 31 | 47 | 45 |
| 51 | Salaries of teachers | $2,226,257 | $33,364 | $19,889 | $70,717 | $10,180 | $40,711 | $7,391 | $32,825 | $16,164 | $19,465 |
| 52 | Average annual salary | $206 | $337 | $180 | $257 | $199 | $209 | $184 | $260 | $224 | $173 |
| 53 | Certificates higher than first grade | .......... | 7 | 6 | 30 | 4 | 20 | 3 | 24 | 6 | 8 |
| 54 | Per cent of certificates higher than first grade | .......... | 7.0 | 5.4 | 10.9 | 7.8 | 10.3 | 7.5 | 19.0 | 8.3 | 7.1 |
| 55 | Third and fourth grade and emergency certificates | .......... | 4 | 17 | 40 | 13 | 42 | 14 | 17 | 13 | 19 |
| 56 | Per cent of teachers holding third and fourth grade and emergency certificates | .......... | 4.0 | 15.4 | 14.5 | 25.4 | 21.6 | 35.0 | 13.4 | 18.0 | 16.9 |
| 57 | Total school expenditures | $5,851,040 | $82,701 | $37,185 | $113,158 | $17,362 | $61,104 | $10,163 | $44,326 | $73,381 | $23,700 |
| 58 | Amount received from State | $1,729,679 | $14,692 | $16,653 | $31,758 | $5,185 | $30,979 | $5,098 | $15,212 | $11,879 | $18,994 |
| 59 | Per cent received from State | 29.5 | 17.7 | 44.7 | 28.0 | 29.8 | 50.6 | 50.1 | 34.3 | 16.1 | 80.1 |
| 60 | Expenditure per child enrolled | $14.27 | $21.23 | $10.90 | $13.54 | $13.29 | $8.76 | $7.90 | $10.99 | $21.33 | $4.70 |
| 61 | Expenditure per child 6 to 20 years of age | $8.38 | $12.74 | $5.43 | $8.39 | $8.13 | $5.68 | $5.33 | $7.41 | $14.91 | $2.96 |
| 62 | Per cent of expenditures used for teachers' salaries | 38.0 | 40.3 | 53.4 | 62.4 | 58.6 | 66.6 | 72.7 | 74.0 | 22.0 | 82.1 |
| 63 | Tuition per child enrolled | $5.41 | $8.55 | $5.82 | $8.44 | $7.78 | $5.83 | $5.74 | $8.12 | $4.68 | $3.85 |
| 64 | Tuition per child 6 to 20 years of age | $3.18 | $5.12 | $2.89 | $5.23 | $4.76 | $3.78 | $3.87 | $5.48 | $3.27 | $2.43 |
| 65 | Value of school buildings | [1] $9,281,975 | $178,574 | $32,000 | $192,800 | $26,800 | $108,900 | $12,700 | $55,560 | $38,150 | $49,100 |
| 66 | Average value of school building | $904 | $3,306 | $351 | $1,329 | $705 | $711 | $373 | $694 | $569 | $491 |
| 67 | Number of school libraries | [1] 3,054 | 65 | 14 | 73 | 8 | 60 | 9 | 46 | 4 | 10 |
| 68 | Number of volumes in libraries | [1] 221,120 | 1,800 | 1,197 | 5,623 | 300 | 5,426 | 475 | 2,103 | 555 | 2,100 |
| 69 | Average number of volumes | 72 | 27 | 85 | 77 | 37 | 90 | 52 | 45 | 138 | 210 |
| 70 | Circulating libraries | 269 | 1 | 4 | 3 | 1 | 3 | .......... | 1 | .......... | .......... |
| 71 | Enrolled in high-school grades | 19,827 | 223 | 142 | 789 | 28 | 313 | 75 | 192 | 10 | 0 |
| 72 | Enrolled in high school from every 100 of population 6 to 20 | 2.84 | 3.43 | 2.07 | 5.85 | 1.31 | 2.91 | 3.97 | 3.03 | 0.20 | 0 |

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[1] Figures for 1911.

*School statistics of Virginia*—Continued.

[Mountain counties are in *italic*.]

| | | Clarke County. | Craig County. | *Dickenson* County. | *Floyd* County. | Franklin County. | Frederick County. | Giles County. | *Grayson* County. | Greene County. | Highland County. | *Lee* County. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Population: | | | | | | | | | | | |
| 1 | Total | 7,468 | 4,711 | 9,199 | 14,092 | 26,480 | 18,651 | 11,623 | 19,856 | 6,937 | 5,317 | 23,840 |
| 2 | White | 5,568 | 4,504 | 9,192 | 13,255 | 21,045 | 16,919 | 10,868 | 18,917 | 5,598 | 5,057 | 22,824 |
| 3 | Colored | 1,900 | 207 | 7 | 837 | 5,435 | 1,732 | 755 | 939 | 1,339 | 260 | 952 |
| 4 | Per cent colored | 25.4 | 4.4 | 0.1 | 5.9 | 20.5 | 9.3 | 6.5 | 4.7 | 19.3 | 4.9 | 4.0 |
| 5 | Foreign white | 26 | 77 | 5 | | 12 | 126 | 16 | 6 | 4 | 72 | 185 |
| 6 | Per cent foreign white | 0.3 | 1.6 | 0.1 | | | 0.7 | 0.1 | | 0.1 | 1.4 | 0.8 |
| 7 | Native white of native parentage | 5,472 | 4,394 | 9,185 | 13,247 | 21,007 | 16,499 | 10,788 | 18,883 | 5,588 | 4,949 | 22,580 |
| 8 | Per cent native white of native parentage | 73.3 | 93.3 | 99.4 | 94.0 | 79.3 | 88.5 | 92.8 | 95.1 | 80.6 | 93.1 | 94.7 |
| 9 | Urban | | | | | | 5,864 | | | | | |
| 10 | Rural | 7,468 | 4,711 | 9,199 | 14,092 | 26,480 | 12,787 | 11,623 | 19,856 | 6,937 | 5,317 | 23,840 |
| 11 | Of largest city or village | 876 | | 342 | 369 | 967 | 483 | 975 | 1,775 | | 240 | 792 |
| 12 | Rural, per square mile | 43.7 | 14.1 | 28.3 | 37.5 | 38.0 | 29.4 | 31.5 | 46.7 | 44.8 | 12.6 | 53.5 |
| 13 | Area, square miles | 171 | 333 | 325 | 376 | 697 | 435 | 369 | 425 | 155 | 422 | 446 |
| 14 | Average area (square miles) to every white school | | | | | | | | | | | |
| 15 | Number of white schoolrooms | 32 | 40 | 70 | 106 | 154 | 94 | 81 | 134 | 31 | 42 | 99 |
| 16 | Schools necessary to provide one for each 12 square miles | 15 | 28 | 28 | 32 | 59 | 37 | 31 | 36 | 13 | 36 | 38 |
| 17 | Population 6 to 20 years of age per school | | | | | | | | | | | |
| 18 | Population 6 to 20 years of age per 12 square miles | 166 | 59 | 130 | 162 | 170 | 150 | 136 | 207 | 192 | 47 | 229 |
| 19 | Number of one-teacher schools | 25 | 23 | 54 | 99 | 145 | 72 | 47 | 68 | 26 | 28 | 65 |
| 20 | Per cent of one-teacher schools | | | | | | | | | | | |
| 21 | Population 10 years of age and over | 5,625 | 3,537 | 5,947 | 10,056 | 18,621 | 14,624 | 8,251 | 14,017 | 4,842 | 3,984 | 16,365 |
| 22 | Illiterate | 766 | 66 | 916 | 1,200 | 3,941 | 1,017 | 1,142 | 2,117 | 1,491 | 329 | 3,333 |
| 23 | Per cent of illiterate | 13.6 | 1.9 | 15.4 | 11.9 | 21.2 | 7.0 | 13.8 | 15.1 | 30.8 | 8.3 | 20.4 |
| 24 | Native white 10 years of age and over | 4,186 | 3,293 | 5,938 | 9,458 | 14,780 | 13,128 | 7,701 | 13,360 | 3,917 | 3,723 | 15,467 |
| 25 | Illiterate | 334 | 57 | 912 | 1,016 | 2,300 | 619 | 935 | 1,866 | 1,126 | 253 | 3,080 |
| 26 | Per cent of illiterate | 8.0 | 1.7 | 15.4 | 10.7 | 15.6 | 4.7 | 12.1 | 14.0 | 28.7 | 6.8 | 19.9 |
| 27 | Population 10 to 20 years of age | 1,763 | 1,213 | 2,500 | 3,801 | 7,006 | 3,995 | 2,925 | 5,245 | 1,705 | 1,235 | 5,946 |
| 28 | Illiterate | 163 | 15 | 200 | 216 | 969 | 150 | 269 | 517 | 406 | 60 | 666 |
| 29 | Per cent of illiterate | 9.2 | 1.2 | 8.0 | 5.7 | 13.8 | 3.8 | 9.2 | 9.9 | 23.8 | 4.9 | 11.2 |
| 30 | Population 6 to 20 years of age | 2,491 | 1,669 | 3,671 | 5,359 | 10,046 | 5,570 | 4,238 | 7,461 | 2,506 | 1,727 | 8,730 |
| 31 | School enrollment (public) | 1,448 | 1,162 | 3,151 | 4,004 | 6,081 | 3,647 | 3,039 | 5,612 | 1,239 | 1,144 | 5,739 |
| 32 | Number enrolled from every 100 of 6 to 20 years of age | 58.1 | 69.6 | 85.8 | 74.7 | 60.5 | 65.4 | 71.7 | 75.2 | 49.4 | 66.2 | 65.7 |
| 33 | White enrollment | 1,084 | 1,141 | 3,151 | 3,806 | 5,157 | 3,327 | 2,898 | 5,344 | 1,043 | 1,081 | 5,619 |
| 34 | Colored | 364 | 21 | | 198 | 924 | 320 | 141 | 268 | 196 | 63 | 120 |
| 35 | Number of private schools | | | | 2 | 1 | 2 | | 1 | | | 3 |
| 36 | Enrolled in private schools, elementary and high | | | | 90 | 139 | 55 | | 25 | | | 424 |
| 37 | Public and private school enrollment | | | | 4,094 | 6,220 | 3,702 | | 5,637 | | | 6,163 |
| 38 | Per cent enrolled in private schools | | | | 2.1 | 2.2 | 1.4 | | 0.4 | | | 6.8 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | PUBLIC SCHOOLS. |  |  |  |  |  |  |  |  |  |  |  |
| 39 | **School attendance** | 840 | 785 | 1,757 | 2,469 | 3,772 | 2,354 | 2,010 | 3,452 | 769 | 752 | 3,342 |
| 40 | **White** | 639 | 771 | 1,757 | 2,336 | 3,263 | 2,162 | 1,920 | 3,306 | 658 | 717 | 3,254 |
| 41 | **Colored** | 201 | 14 | ......... | 133 | 509 | 192 | 90 | 146 | 111 | 35 | 88 |
| 42 | Attending daily from every 100 enrolled | 58.0 | 67.5 | 55.7 | 61.6 | 62.2 | 64.5 | 66.1 | 61.5 | 62.0 | 65.7 | 58.2 |
| 43 | White | 58.9 | 67.5 | 55.7 | 61.3 | 63.2 | 65.2 | 66.2 | 61.8 | 63.0 | 66.3 | 57.9 |
| 44 | Colored | 49.7 | 66.6 | ......... | 67.1 | 55.0 | 60.0 | 63.8 | 54.4 | 55.7 | 55.5 | 73.3 |
| 45 | Attending daily from every 100 of population 6 to 20 | 33.6 | 46.9 | 47.7 | 46.0 | 37.6 | 42.1 | 47.3 | 46.2 | 30.6 | 43.4 | 38.3 |
| 46 | Length of session, in days | 141 | 134 | 112 | 102 | 100 | 126 | 113 | 103 | 111 | 122 | 139 |
| 47 | Days each child enrolled attended | 81.7 | 90.4 | 62.3 | 62.8 | 62.2 | 81.2 | 74.6 | 62.7 | 68.2 | 80.1 | 80.8 |
| 48 | Days each child 6 to 20 years of age attended | 47.3 | 62.8 | 53.4 | 46.9 | 37.6 | 53.0 | 53.4 | 47.1 | 33.6 | 52.9 | 53.2 |
| 49 | Teachers | 42 | 41 | 70 | 111 | 178 | 103 | 86 | 141 | 37 | 44 | 102 |
| 50 | Enrollment per teacher | 34 | 28 | 45 | 36 | 34 | 35 | 35 | 39 | 33 | 26 | 56 |
| 51 | Salaries of teachers | $10,651 | $9,113 | $16,853 | $14,214 | $26,664 | $26,657 | $19,396 | $27,060 | $6,794 | $11,549 | $30,823 |
| 52 | Average annual salary | $253 | $222 | $240 | $128 | $149 | $258 | $225 | $191 | $183 | $162 | $301 |
| 53 | Certificates higher than first grade | 8 | 4 | 10 | 2 | 0 | 5 | 11 | 9 | 1 | 6 | 10 |
| 54 | Per cent of certificates higher than first grade | 19.0 | 9.7 | 14.2 | 1.8 | 0 | 4.9 | 12.7 | 6.3 | 2.7 | 13.6 | 9.8 |
| 55 | Third and fourth grade and emergency certificates | 5 | 10 | 18 | 44 | 59 | 32 | 23 | 42 | 8 | 4 | 14 |
| 56 | Per cent of teachers holding third and fourth grade and emergency certificates | 11.9 | 24.3 | 25.7 | 39.6 | 33.1 | 31.0 | 26.7 | 29.7 | 21.6 | 9.0 | 13.7 |
| 57 | Total school expenditures | $16,222 | $13,241 | $31,493 | $17,555 | $37,875 | $42,649 | $29,198 | $32,004 | $9,172 | $17,533 | $53,044 |
| 58 | Amount received from State | $6,243 | $4,468 | $9,552 | $12,841 | $22,137 | $16,229 | $11,158 | $22,849 | $6,284 | $4,699 | $21,212 |
| 59 | Per cent received from State | 38.4 | 33.7 | 30.3 | 73.1 | 55.5 | 38.0 | 38.2 | 71.1 | 68.5 | 26.8 | 39.9 |
| 60 | Expenditure per child enrolled | $11.20 | $11.39 | $9.99 | $4.38 | $6.22 | $11.42 | $9.60 | $5.71 | $7.40 | $15.32 | $9.25 |
| 61 | Expenditure per child 6 to 20 years of age | $6.50 | $7.92 | $8.57 | $3.27 | $3.76 | $7.46 | $6.88 | $4.29 | $3.65 | $10.15 | $6.07 |
| 62 | Per cent of expenditures used for teachers' salaries | 71.8 | 67.9 | 53.5 | 80.9 | 70.4 | 62.5 | 66.4 | 84.3 | 74.0 | 65.8 | 58.1 |
| 63 | Tuition per child enrolled | $8.04 | $7.73 | $5.34 | $3.54 | $4.37 | $7.13 | $6.37 | $4.81 | $5.47 | $10.07 | $5.37 |
| 64 | Tuition per child 6 to 20 years of age | $1.66 | $5.37 | $4.58 | $2.64 | $2.64 | $4.66 | $4.56 | $3.61 | $2.70 | $6.67 | $3.52 |
| 65 | Value of school buildings | $41,500 | $17,500 | $47,242 | $21,600 | $45,500 | $70,925 | $44,940 | $79,350 | $10,340 | $19,000 | $98,800 |
| 66 | Average value of school building | $1,296 | $603 | $787 | $203 | $282 | $864 | $680 | $801 | $323 | $575 | $1,266 |
| 67 | Number of school libraries | 18 | 5 | 4 | 1 | 8 | 11 | 19 | 15 | 8 | 9 | 4 |
| 68 | Number of volumes in libraries | 1,040 | 500 | 354 | 100 | 1,600 | 965 | 1,950 | 2,950 | 287 | 281 | 300 |
| 69 | Average number of volumes | 57 | 100 | 88 | 100 | 200 | 87 | 102 | 196 | 35 | 31 | 75 |
| 70 | Circulating libraries | ......... | 2 | ......... | ......... | 2 | ......... | 3 | 5 | 1 | 2 | 1 |
| 71 | Enrolled in high-school grades | 99 | 120 | 40 | 0 | 238 | 169 | 196 | 350 | 41 | 82 | 209 |
| 72 | **Enrolled in high school from every 100 of population 6 to 20** | 3.97 | 7.18 | 1.08 | 0 | 2.36 | 3.03 | 4.62 | 4.69 | 1.63 | 4.74 | 2.39 |

*School statistics of Virginia*—Continued.

[The mountain counties are in *italic*.]

| | | Loudoun County. | Madison County. | Montgomery County. | Nelson County. | Page County. | *Patrick* County. | Pulaski County. | Rappahannock County. | Roanoke County. | Rockbridge County. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Population: | | | | | | | | | | |
| 1 | Total | 21,167 | 10,055 | 21,470 | 16,821 | 14,147 | 17,195 | 17,246 | 8,044 | 54,497 | 24,416 |
| 2 | White | 15,946 | 6,791 | 18,481 | 11,558 | 12,981 | 15,577 | 14,316 | 5,896 | 43,042 | 20,471 |
| 3 | Colored | 5,221 | 3,264 | 2,988 | 5,263 | 1,166 | 1,618 | 2,930 | 2,148 | 11,449 | 3,944 |
| 4 | Per cent colored | 24.7 | 32.5 | 13.9 | 31.3 | 8.2 | 9.4 | 17.0 | 26.7 | 21.0 | 16.2 |
| 5 | Foreign white | 103 | 1 | 60 | 48 | 23 | 1 | 26 | 2 | 842 | 59 |
| 6 | Per cent foreign white | 0.5 | .......... | 0.3 | 0.3 | 0.2 | .......... | 0.3 | .......... | 1.5 | 0.2 |
| 7 | Native white of native parentage | 15,635 | 6,788 | 18,272 | 11,452 | 12,906 | 15,571 | 14,125 | 5,882 | 40,952 | 20,279 |
| 8 | Per cent native white of native parentage | 73.9 | 67.5 | 85.1 | 68.1 | 91.2 | 90.6 | 81.9 | 73.1 | 75.1 | 83.1 |
| 9 | Urban | .......... | .......... | 4,202 | .......... | .......... | .......... | 4,807 | .......... | 38,723 | 6,176 |
| 10 | Rural | 21,167 | 10,055 | 17,268 | 16,821 | 14,147 | 17,195 | 12,439 | 8,044 | 15,774 | 18,240 |
| 11 | Of largest city or village | 1,597 | .......... | 1,568 | .......... | 1,431 | 388 | 4,807 | 235 | 3,849 | 2,931 |
| 12 | Rural per square mile | 40.8 | 31.0 | 43.1 | 35.6 | 43.9 | 35.5 | 37.4 | 29.4 | 29.8 | 29.6 |
| 13 | Area, square miles | 519 | 324 | 401 | 473 | 322 | 485 | 333 | 274 | 613 | 616 |
| 14 | Average area (square miles) to each white school | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 15 | Number of white schoolrooms | 98 | 53 | 107 | 100 | 81 | 105 | 79 | 40 | 222 | 149 |
| 16 | Schools necessary to provide 1 for each 12 square miles | 44 | 27 | 34 | 40 | 27 | 41 | 28 | 23 | 52 | 52 |
| 17 | Population 6 to 20 years of age per school | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 18 | Population 6 to 20 years of age per 12 square miles | 149 | 135 | 218 | 153 | 178 | 156 | 224 | 125 | 334 | 159 |
| 19 | Number of 1-teacher schools | 53 | 50 | 47 | 83 | 57 | 60 | 24 | 31 | 49 | 80 |
| 20 | Per cent of 1-teacher schools | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |
| 21 | Population 10 years of age and over | 16,406 | 7,274 | 15,796 | 11,868 | 10,366 | 11,617 | 12,508 | 5,927 | 42,155 | 17,999 |
| 22 | Illiterate | 1,690 | 1,481 | 1,864 | 2,555 | 1,121 | 2,102 | 1,933 | 1,332 | 3,306 | 2,227 |
| 23 | Per cent of illiterate | 10.3 | 20.4 | 11.8 | 21.5 | 10.8 | 18.1 | 15.5 | 22.5 | 7.8 | 12.4 |
| 24 | Native white 10 years of age and over | 12,432 | 4,980 | 13,439 | 8,202 | 9,481 | 10,507 | 10,211 | 4,372 | 32,218 | 14,919 |
| 25 | Illiterate | 438 | 660 | 1,205 | 1,050 | 847 | 1,801 | 1,256 | 858 | 1,097 | 1,375 |
| 26 | Per cent of illiterate | 3.5 | 13.3 | 9.0 | 12.8 | 8.9 | 17.1 | 12.3 | 19.6 | 3.4 | 9.2 |
| 27 | Population 10 to 20 years of age | 4,742 | 2,533 | 5,240 | 4,239 | 3,354 | 4,347 | 4,475 | 2,013 | 12,692 | 5,847 |
| 28 | Illiterate | 291 | 311 | 360 | 673 | 227 | 432 | 492 | 320 | 488 | 448 |
| 29 | Per cent of illiterate | 6.1 | 12.3 | 6.9 | 15.9 | 6.8 | 9.9 | 11.0 | 15.9 | 3.8 | 7.7 |
| 30 | Population 6 to 20 years of age | 6,582 | 3,671 | 7,443 | 6,133 | 4,823 | 6,418 | 6,299 | 2,875 | 17,398 | 8,275 |
| 31 | School enrollment (public) | 4,086 | 2,153 | 4,847 | 2,830 | 3,248 | 4,652 | 3,711 | 1,465 | 11,033 | 5,268 |
| 32 | Number enrolled from every 100 of population 6 to 20 | 62.0 | 58.6 | 65.1 | 46.1 | 67.3 | 72.4 | 58.9 | 50.9 | 63.4 | 63.6 |
| 33 | White enrollment | 3,077 | 1,411 | 4,182 | 1,744 | 3,064 | 4,491 | 3,116 | 1,073 | 9,021 | 4,478 |
| 34 | Colored enrollment | 1,009 | 742 | 665 | 1,086 | 184 | 161 | 595 | 392 | 2,012 | 790 |
| 35 | Number of private schools | 1 | 2 | 1 | 2 | .......... | 1 | 1 | .......... | 3 | 2 |
| 36 | Enrolled in private schools, elementary and high | 35 | 122 | 14 | 35 | .......... | 45 | .......... | .......... | .......... | .......... |
| 37 | Public and private school enrollment | 4,121 | 2,275 | 4,861 | 2,865 | .......... | 4,697 | .......... | .......... | .......... | .......... |
| 38 | Per cent enrolled in private schools | 0,8 | 5.3 | 0.3 | 1.2 | .......... | 0.9 | .......... | .......... | .......... | .......... |

| | PUBLIC SCHOOLS. | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 39 | Public school attendance | 2,603 | 1,337 | 3,173 | 2,085 | 2,280 | 1,964 | 2,300 | 847 | 7,821 | 3,599 |
| 40 | White | 2,013 | 875 | 2,729 | 1,441 | 2,142 | 1,835 | 1,941 | 571 | 6,586 | 3,044 |
| 41 | Colored | 590 | 462 | 444 | 644 | 138 | 129 | 359 | 266 | 1,235 | 555 |
| 42 | Attending daily from every 100 enrolled | 63.7 | 62.0 | 65.4 | 73.6 | 70.1 | 42.2 | 61.9 | 57.8 | 70.8 | 68.3 |
| 43 | White | 65.4 | 62.0 | 65.2 | 82.6 | 69.9 | 40.8 | 62.2 | 53.2 | 73.0 | 67.9 |
| 44 | Colored | 58.4 | 62.2 | 66.6 | 59.3 | 75.0 | 80.1 | 60.3 | 67.8 | 61.4 | 70.2 |
| 45 | Attending daily from every 100 of population 6 to 20 | 39.4 | 36.3 | 42.5 | 33.9 | 47.1 | 30.5 | 34.4 | 29.4 | 44.8 | 43.4 |
| 46 | Length of session, in days | 152 | 107 | 129 | 116 | 119 | 109 | 132 | 125 | 153 | 133 |
| 47 | Days each child enrolled attended | 96.8 | 66.3 | 84.3 | 85.3 | 83.4 | 45.9 | 82.1 | 72.2 | 108.3 | 90.3 |
| 48 | Days each child 6 to 20 years of age attended | 59.8 | 38.8 | 54.8 | 39.3 | 56.0 | 33.2 | 45.4 | 36.7 | 68.5 | 57.7 |
| 49 | Teachers | 124 | 73 | 126 | 127 | 87 | 110 | 91 | 52 | 262 | 169 |
| 50 | Enrollment per teacher | 32 | 29 | 38 | 22 | 37 | 42 | 40 | 28 | 42 | 31 |
| 51 | Salaries of teachers | $39,913 | $12,139 | $31,822 | $24,023 | $18,022 | $17,001 | $26,710 | $11,985 | $117,181 | $44,559 |
| 52 | Average annual salary | $321 | $166 | $252 | $189 | $207 | $154 | $293 | $230 | $447 | $263 |
| 53 | Certificates higher than first grade | 33 | 6 | 14 | 7 | 6 | 4 | 17 | 8 | 71 | 34 |
| 54 | Per cent of certificates higher than first grade | 26.6 | 8.2 | 11.1 | 5.5 | 6.8 | 3.6 | 18.6 | 15.3 | 27.0 | 20.1 |
| 55 | Third and fourth grade and emergency certificates | 10 | 25 | 19 | 42 | 14 | 41 | 11 | 11 | 5 | 19 |
| 56 | Per cent of third and fourth grade and emergency certificates | 8.0 | 34.2 | 15.0 | 33.0 | 16.0 | 37.2 | 12.0 | 21.1 | 1.9 | 11.2 |
| 57 | Total school expenditures | $69,375 | $17,701 | $53,483 | $34,892 | $26,402 | $28,704 | $41,431 | $20,492 | $239,529 | $62,462 |
| 58 | Amount received from State | $16,594 | $8,351 | $18,118 | $15,909 | $13,532 | $16,451 | $14,506 | $7,727 | $36,272 | $22,874 |
| 59 | Per cent received from State | 23.9 | 47.1 | 33.8 | 45.5 | 51.2 | 57.3 | 35.0 | 37.7 | 15.1 | 36.6 |
| 60 | Expenditure per child enrolled | $16.97 | $8.22 | $11.03 | $12.32 | $8.12 | $6.17 | $11.16 | $13.98 | $21.71 | $11.85 |
| 61 | Expenditure per child 6 to 20 years of age | $10.52 | $4.81 | $7.18 | $5.67 | $5.46 | $4.46 | $6.57 | $7.11 | $13.76 | $7.53 |
| 62 | Per cent of expenditures used for teachers' salaries | 57.5 | 68.5 | 67.6 | 68.8 | 68.2 | 59.2 | 64.4 | 58.4 | 48.9 | 71.3 |
| 63 | Tuition per child enrolled | $9.75 | $5.63 | $7.45 | $8.47 | $5.53 | $3.65 | $7.17 | $8.15 | $10.61 | $8.44 |
| 64 | Tuition per child 6 to 20 years of age | $6.04 | $3.29 | $4.85 | $3.90 | $3.72 | $2.64 | $4.23 | $4.15 | $6.71 | $5.36 |
| 65 | Value of school buildings | $102,825 | $12,200 | $91,800 | $14,000 | $53,000 | $3,095 | $62,150 | $29,300 | $405,500 | $72,620 |
| 66 | Average value of school building | $1,301 | $193 | $1,257 | $138 | $779 | $37 | $1,043 | $792 | $5,266 | $685 |
| 67 | Number of school libraries | 59 | 11 | 60 | 15 | 30 | 6 | 44 | 12 | 109 | 114 |
| 68 | Number of volumes in libraries | 4,431 | 1,374 | 2,249 | 1,212 | 1,588 | .......... | 2,154 | 230 | 4,501 | .......... |
| 69 | Average number of volumes | 75 | 124 | 37 | 80 | 52 | .......... | 48 | 19 | 41 | .......... |
| 70 | Circulating libraries | 6 | 1 | 6 | 6 | 1 | .......... | 2 | .......... | .......... | 5 |
| 71 | Enrolled in high-school grades | 332 | 80 | 157 | 130 | 129 | 69 | 270 | 106 | 599 | 371 |
| 72 | Enrolled in high school from every 100 of population 6 to 20 | 5.04 | 2.17 | 2.10 | 2.11 | 2.67 | 1.07 | 4.28 | 3.68 | 3.44 | 4.48 |

*School statistics of Virginia*—Continued.

[The mountain counties are in *italic*.]

| | | Rockingham County. | Russell County. | *Scott* County. | Shenandoah County. | Smyth County. | Tazewell County. | Warren County. | Washington County. | Wise (city). | Wythe County. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Population: | | | | | | | | | | |
| 1 | Total | 34,903 | 23,474 | 23,814 | 20,942 | 20,326 | 24,946 | 8,589 | 39,077 | 34,162 | 20,372 |
| 2 | White | 32,567 | 22,448 | 2,311 | 20,448 | 19,345 | 22,126 | 7,457 | 35,612 | 31,301 | 18,183 |
| 3 | Colored | 2,335 | 1,025 | 503 | 493 | 981 | 2,820 | 1,131 | 3,456 | 2,861 | 2,188 |
| 4 | Per cent colored | 6.7 | 4.4 | 2.1 | 2.4 | 4.8 | 11.3 | 13.2 | 8.8 | 8.4 | 10.7 |
| 5 | Foreign white | 105 | 568 | 9 | 29 | 48 | 649 | 51 | 100 | 1,447 | 48 |
| 6 | Per cent foreign white | 0.3 | 2.4 | | 0.2 | 0.2 | 2.6 | 0.6 | 0.3 | 4.2 | 0.2 |
| 7 | Native white of native parentage | 32,169 | 21,749 | 23,283 | 20,288 | 19,179 | 21,122 | 7,372 | 35,294 | 29,210 | 18,057 |
| 8 | Per cent native white of native parentage | 92.2 | 92.7 | 97.8 | 96.9 | 94.4 | 84.7 | 85.4 | 90.3 | 85.5 | 88.6 |
| 9 | Urban | 4,879 | | | | 2,727 | | | 6,247 | 2,590 | 3,054 |
| 10 | Rural | 30,024 | 23,474 | 23,814 | 20,942 | 17,599 | 24,946 | 8,589 | 32,830 | 31.572 | 17,318 |
| 11 | Of largest city or village | 4,879 | 869 | 599 | 1,314 | 2,527 | 2,452 | 1,133 | 1,757 | 2,590 | 3,054 |
| 12 | Rural per square mile | 34.3 | 47.3 | 43.9 | 41.1 | 40.5 | 47.0 | 39.8 | 54.4 | 75.2 | 36.2 |
| 13 | Area, square miles | 876 | 496 | 543 | 510 | 435 | 531 | 216 | 604 | 420 | 479 |
| 14 | Average area (square miles) to each white school | | | | | | | | | | |
| 15 | Number of white schoolrooms | 231 | 115 | 118 | 133 | 108 | 124 | 53 | 195 | [1] 149 | 107 |
| 16 | Schools necessary to provide 1 for each 12 square miles | 73 | 42 | 46 | 43 | 37 | 45 | 18 | 51 | 35 | 40 |
| 17 | Population 6 to 20 years of age per school | | | | | | | | | | |
| 18 | Population 6 to 20 years of age per 12 square miles | 157 | 200 | 191 | 155 | 190 | 195 | 160 | 266 | 330 | 180 |
| 19 | Number of 1-teacher schools | 91 | 59 | 67 | 59 | 44 | 61 | 35 | 77 | 49 | 50 |
| 20 | Per cent of 1-teacher schools | | | | | | | | | | |
| 21 | Population 10 years of age and over | 26,205 | 16,369 | 16,623 | 15,988 | 14,455 | 17,711 | 6,484 | 28,244 | 23,548 | 14,816 |
| 22 | Illiterate | 2,582 | 3,165 | 3,234 | 959 | 2,199 | 2,560 | 666 | 4,054 | 4,119 | 1,757 |
| 23 | Per cent of illiterate | 9.9 | 19.3 | 19.5 | 6.0 | 15.2 | 14.5 | 10.3 | 14.4 | 17.5 | 11.9 |
| 24 | Native white 10 years of age and over | 24,344 | 15,031 | 16,261 | 15,562 | 13,692 | 14,955 | 5,622 | 25,522 | 19,938 | 13,096 |
| 25 | Illiterate | 2,021 | 2,792 | 3,089 | 846 | 2,025 | 1,901 | 395 | 3,447 | 3,121 | 1,305 |
| 26 | Per cent of illiterate | 8.3 | 18.6 | 19.0 | 5.4 | 14.8 | 12.7 | 7.0 | 13.5 | 15.7 | 10.0 |
| 27 | Population 10 to 20 years of age | 8,123 | 5,842 | 6,120 | 4,705 | 4,820 | 6,114 | 2,068 | 9,560 | 8,003 | 5,087 |
| 28 | Illiterate | 429 | 770 | 690 | 150 | 513 | 624 | 116 | 875 | 946 | 352 |
| 29 | Per cent of illiterate | 5.3 | 13.2 | 11.3 | 3.2 | 10.6 | 10.2 | 5.6 | 9.2 | 11.8 | 6.9 |
| 30 | Population 6 to 20 years of age | 11,502 | 8,402 | 8,793 | 6,672 | 7,032 | 8,826 | 2,887 | 13,579 | 11,558 | 7,202 |
| 31 | School enrollment (public) | 8,203 | 5,827 | 7,155 | 4,733 | 4,922 | 5,962 | 2,004 | 8,692 | 7,275 | 4,459 |
| 32 | Number enrolled from every 100 of population 6 to 20 | 71.3 | 69.2 | 81.3 | 70.9 | 69.9 | 67.7 | 69.3 | 64.0 | 62.9 | 61.9 |
| 33 | White enrollment | 7,712 | 5,681 | 7,096 | 4,634 | 4,694 | 5,400 | 1,721 | 8,128 | 6,875 | 3,990 |
| 34 | Colored enrollment | 491 | 146 | 59 | 99 | 228 | 582 | 283 | 564 | 400 | 469 |
| 35 | Number of private schools | 3 | | | 1 | 1 | 1 | 1 | 3 | | 3 |
| 36 | Enrolled in private schools, elementary and high | 275 | | | 62 | 25 | 30 | 135 | 292 | | 110 |
| 37 | Public and private school enrollment | 8,478 | | | 4,795 | 4,947 | 6,012 | 2,139 | 8,984 | | 4,569 |
| 38 | Per cent enrolled in private schools | 3.2 | | | 1.3 | 0.5 | 0.4 | 6.3 | 3.2 | | 2.4 |

| | PUBLIC SCHOOLS. | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 39 | Public school attendance | 5,628 | 3,468 | 5,241 | 3,141 | 3,011 | 3,726 | 1,319 | 5,466 | 4,383 | 2,824 |
| 40 | White | 5,284 | 3,364 | 5,203 | 3,077 | 2,873 | 3,348 | 1,124 | 5,082 | 4,122 | 2,538 |
| 41 | Colored | 344 | 104 | 38 | 64 | 138 | 378 | 195 | 384 | 261 | 286 |
| 42 | Attending daily from every 100 enrolled | 68.6 | 59.5 | 73.2 | 66.3 | 61.1 | 62.2 | 65.8 | 62.8 | 60.2 | 63.8 |
| 43 | White | 67.2 | 59.2 | 73.3 | 66.3 | 61.2 | 62.0 | 65.3 | 62.4 | 59.9 | 63.6 |
| 44 | Colored | 70.0 | 71.1 | 64.4 | 64.6 | 60.5 | 64.9 | 68.9 | 68.0 | 65.2 | 60.9 |
| 45 | Attending daily from every 100 of population 6 to 20 | 48.9 | 41.0 | 59.5 | 47.0 | 42.6 | 42.1 | 45.5 | 40.1 | 37.8 | 39.1 |
| 46 | Length of session, in days | 128 | 111 | 120 | 127 | 133 | 140 | 127 | 137 | 140 | 130 |
| 47 | Days each child enrolled attended | 87.8 | 66.0 | 87.8 | 84.2 | 81.2 | 87.0 | 83.5 | 86.0 | 84.2 | 82.2 |
| 48 | Days each child 6 to 20 years of age attended | 62.5 | 45.0 | 71.4 | 59.6 | 56.6 | 58.9 | 57.7 | 54.9 | 52.9 | 50.8 |
| 49 | Teachers | 244 | 119 | 119 | 137 | 114 | 136 | 60 | 215 | 159 | 118 |
| 50 | Enrollment per teacher | 33 | 48 | 60 | 34 | 43 | 43 | 33 | 40 | 45 | 37 |
| 51 | Salaries of teachers | $65,801 | $28,867 | $31,811 | $34,228 | $28,802 | $39,940 | $13,954 | $61,234 | $59,231 | $32,905 |
| 52 | Average annual salary | $269 | $242 | $267 | $249 | $252 | $293 | $232 | $284 | $372 | $278 |
| 53 | Certificates higher than first grade | 34 | 21 | 47 | 21 | 16 | 26 | 3 | 57 | 47 | 19 |
| 54 | Per cent of certificates higher than first grade | 13.9 | 17.6 | 39.4 | 15.3 | 14.0 | 19.1 | 5.0 | 26.5 | 29.6 | 16.1 |
| 55 | Third and fourth grade and emergency certificates | 31 | 28 | 13 | 19 | 25 | 5 | 0 | 33 | 26 | 18 |
| 56 | Per cent of third and fourth grade and emergency certificates | 12.7 | 23.5 | 10.9 | 13.8 | 21.9 | 3.6 | 0 | 15.3 | 16.3 | 15.2 |
| 57 | Total school expenditures | $124,787 | $43,632 | $39,031 | $63,132 | $37,858 | $56,502 | $19,957 | $79,838 | $115,658 | $77,813 |
| 58 | Amount received from State | $27,758 | $22,848 | $24,300 | $18,100 | $17,457 | $21,047 | $9,713 | $32,611 | $25,190 | $17,281 |
| 59 | Per cent received from State | 22.2 | 52.3 | 62.2 | 28.6 | 46.1 | 35.1 | 48.6 | 40.8 | 21.8 | 22.2 |
| 60 | Expenditure per child enrolled | $15.09 | $7.48 | $5.45 | $13.33 | $7.68 | $9.44 | $9.95 | $9.18 | $15.89 | $17.45 |
| 61 | Expenditure per child 6 to 20 years of age | $10.76 | $5.17 | $4.43 | $9.45 | $5.37 | $6.39 | $6.89 | $5.87 | $10.00 | $10.80 |
| 62 | Per cent of expenditures used for teachers' salaries | 52.7 | 66.1 | 81.2 | 54.2 | 76.7 | 70.6 | 69.9 | 76.6 | 51.2 | 42.2 |
| 63 | Tuition per child enrolled | $7.94 | $4.94 | $4.42 | $7.21 | $5.89 | $6.66 | $6.95 | $7.03 | $8.12 | $7.36 |
| 64 | Tuition per child 6 to 20 years of age | $5.66 | $3.41 | $3.59 | $5.12 | $4.11 | $4.51 | $4.81 | $4.49 | $5.12 | $4.55 |
| 65 | Value of school buildings | $245,889 | $90,500 | $121,659 | $78,420 | $84,350 | $104,860 | $58,200 | $160,200 | $189,450 | $111,280 |
| 66 | Average value of school building | $1,794 | $1,146 | $1,294 | $825 | $1,278 | $1,205 | $1,353 | $1,393 | $2,460 | $1,545 |
| 67 | Number of school libraries | 52 | 19 | 28 | 25 | 67 | 63 | 19 | 77 | 58 | 58 |
| 68 | Number of volumes in libraries | 6,950 | 1,655 | 1,634 | 2,234 | 4,700 | 2,466 | 1,900 | 3,945 | 2,800 | 3,119 |
| 69 | Average number of volumes | 133 | 87 | 58 | 89 | 70 | 39 | 100 | 51 | 48 | 53 |
| 70 | Circulating libraries | 5 | ........ | 2 | 6 | 9 | 2 | ........ | 4 | 1 | 2 |
| 71 | Enrolled in high-school grades | 607 | 129 | 67 | 257 | 286 | 0 | 0 | 510 | 262 | 273 |
| 72 | Enrolled in high school from every 100 of population 6 to 20 | 5.27 | 1.53 | 0.76 | 3.85 | 4.06 | 0 | 0 | 3.75 | 2.26 | 3.79 |

[1] 69 buildings.

## *School statistics of West Virginia.*

[The mountain counties are in *italic*.]

| | | Entire State. | Berkeley County. | Boone County. | *Grant County.* | *Greenbrier County.* | Hampshire County. | Hardy County. | Jefferson County. | Lincoln County. | Logan County. | McDowell County. | Mercer County. | Mineral County. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Population: | | | | | | | | | | | | | |
| 1 | Total | 1,221,119 | 21,999 | 10,331 | 7,838 | 24,833 | 11,694 | 9,163 | 20,956 | 20,491 | 14,476 | 47,856 | 38,371 | 16,674 |
| 2 | White | 1,156,817 | 20,198 | 10,167 | 7,585 | 23,054 | 11,391 | 8,775 | 20,930 | 20,461 | 13,939 | 38,186 | 32,406 | 16,073 |
| 3 | Colored | 64,173 | 1,801 | 164 | 253 | 1,779 | 303 | 387 | 26 | 30 | 532 | 14,667 | 5,960 | 601 |
| 4 | Per cent colored | 5.3 | 8.2 | 1.6 | 3.2 | 7.2 | 2.6 | 4.2 | 0.1 | 0.1 | 3.7 | 30.6 | 15.5 | 3.6 |
| 5 | Foreign white | 57,072 | 344 | 9 | 360 | 455 | 36 | 49 | 109 | 29 | 927 | 6,260 | 1,148 | 825 |
| 6 | Per cent foreign white | 4.7 | 1.6 | 0.1 | 4.6 | 1.8 | 0.3 | 0.5 | 0.7 | 0.1 | 6.4 | 13.1 | 3.0 | 4.9 |
| 7 | Native white of native parentage | 1,042,107 | 19,282 | 10,121 | 6,987 | 22,169 | 11,251 | 8,637 | 20,643 | 20,353 | 12,792 | 25,196 | 30,515 | 14,041 |
| 8 | Per cent of native white of native parentage | 85.3 | 87.6 | 98.0 | 89.1 | 89.3 | 96.2 | 94.3 | 98.5 | 99.3 | 88.4 | 52.6 | 79.5 | 84.2 |
| 9 | Urban | 228,242 | 10,698 | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | 14,215 | 3,705 |
| 10 | Rural | 992,877 | 11,301 | 10,331 | 7,838 | 24,833 | 11,694 | 9,163 | 20,956 | 20,491 | 14,476 | 47,856 | 24,156 | 12,969 |
| 11 | Of largest city or village | 41,641 | 10,698 | 295 | 417 | 2,157 | 1,112 | 646 | 2,662 | ........ | 1,640 | 2,047 | 11,188 | 3,705 |
| 12 | Rural, per square mile | 41.3 | 34.8 | 20.4 | 17.1 | 24.9 | 18.0 | 16.0 | 62.7 | 49.0 | 33.1 | 89.8 | 57.7 | 37.2 |
| 13 | Area, square miles | 24,022 | 325 | 506 | 461 | 998 | 648 | 574 | 211 | 418 | 438 | 533 | 419 | 349 |
| 14 | Average area (square miles) to each white school | 3.4 | 4.6 | 5.6 | 6.4 | 5.3 | 5.3 | 6.6 | 4.7 | 3.6 | 5.1 | 3.6 | 2.5 | 4.0 |
| 15 | Number of white schools | 6,919 | 70 | 90 | 72 | 187 | 121 | 87 | 44 | 115 | 85 | 148 | 166 | 87 |
| 16 | Schools necessary to provide 1 for each 12 square miles | 2,002 | 28 | 43 | 39 | 84 | 54 | 48 | 18 | 35 | 37 | 45 | 35 | 30 |
| 17 | Population 6 to 20 years of age, per school | 55 | 79 | 41 | 44 | 42 | 32 | 35 | 84 | 65 | 56 | 63 | 66 | 57 |
| 18 | Population 6 to 20 years of age for each 12 square miles | 198 | 237 | 90 | 65 | 101 | 73 | 65 | 270 | 216 | 133 | 308 | 356 | 176 |
| 19 | One-teacher schools | 5,964 | 69 | 87 | 69 | 173 | 119 | 86 | 35 | 108 | 77 | 113 | 154 | 65 |
| 20 | Per cent of one-teacher schools | 83 | 82 | 93 | 92 | 86 | 96 | 95 | 60 | 94 | 88 | 51 | 81 | 70 |
| 21 | Population 10 years of age and over | 903,822 | 17,159 | 7,088 | 5,765 | 18,247 | 8,920 | 6,636 | 12,311 | 13,748 | 10,119 | 35,604 | 27,932 | 12,470 |
| 22 | Illiterate | 74,866 | 938 | 654 | 825 | 1,410 | 480 | 594 | 944 | 2,151 | 1,827 | 7,186 | 2,794 | 811 |
| 23 | Per cent of illiterate | 8.3 | 5.5 | 9.2 | 14.3 | 7.7 | 5.4 | 9.0 | 7.7 | 15.6 | 18.1 | 20.2 | 10.0 | 6.5 |
| 24 | Native white 10 years of age and over | 798,132 | 15,385 | 6,969 | 5,229 | 16,467 | 8,648 | 6,301 | 9,552 | 13,695 | 8,798 | 17,905 | 22,162 | 11,221 |
| 25 | Illiterate | 51,407 | 560 | 633 | 527 | 999 | 394 | 495 | 410 | 2,142 | 1,484 | 2,601 | 1,504 | 478 |
| 26 | Per cent of illiterate | 6.4 | 3.6 | 9.1 | 10.1 | 6.1 | 4.6 | 7.9 | 4.3 | 15.6 | 16.9 | 14.5 | 6.8 | 4.3 |
| 27 | Population 10 to 20 years of age | 280,504 | 4,862 | 2,673 | 1,802 | 6,007 | 2,866 | 2,213 | 3,548 | 5,174 | 3,426 | 9,830 | 8,837 | 3,718 |
| 28 | Illiterate | 11,367 | 168 | 107 | 120 | 211 | 73 | 124 | 126 | 425 | 358 | 1,267 | 358 | 125 |
| 29 | Per cent of illiterate | 4.1 | 3.5 | 4.0 | 6.7 | 3.5 | 2.5 | 5.6 | 3.6 | 8.2 | 10.4 | 12.9 | 4.1 | 3.4 |
| 30 | Population 6 to 20 years of age | 396,818 | 6,665 | 3,873 | 2,565 | 8,499 | 3,995 | 3,162 | 4,873 | 7,573 | 4,942 | 13,866 | 12,483 | 5,281 |
| 31 | School enrollment | 284,757 | 4,437 | 2,918 | 2,021 | 6,296 | 2,747 | 2,162 | 2,738 | 5,021 | 3,851 | 8,458 | 9,501 | 3,609 |
| 32 | Enrolled from every 100 of population 6 to 20 | 71.7 | 66.5 | 75.3 | 78.7 | 74.0 | 68.7 | 68.3 | 56.1 | 66.3 | 77.9 | 60.9 | 76.1 | 68.3 |
| 33 | White enrollment | 273,097 | 4,088 | 2,859 | 1,961 | 5,808 | 2,692 | 2,100 | 2,012 | 5,021 | 3,804 | 6,244 | 8,446 | 3,468 |
| 34 | Colored enrollment | 11,660 | 349 | 59 | 60 | 488 | 55 | 62 | 726 | ........ | 47 | 2,214 | 1,055 | 141 |
| 35 | Private schools[1] | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ | ........ |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 36 | Private-school enrollment in elementary and high schools[1] | | | | | | | | | | | | | |
| 37 | Public and private school enrollment[1] | | | | | | | | | | | | | |
| 38 | Per cent enrolled in private schools[1] | | | | | | | | | | | | | |
| | PUBLIC SCHOOLS. | | | | | | | | | | | | | |
| 39 | Average school attendance | 194,900 | 3,016 | 1,946 | 1,348 | 4,176 | 1,848 | 1,487 | 1,739 | 3,020 | 2,376 | 4,859 | 5,711 | 2,441 |
| 40 | White | 187,103 | 2,790 | 1,901 | 1,306 | 3,851 | 1,806 | 1,443 | 1,333 | 3,020 | 2,342 | 3,453 | 5,035 | 2,349 |
| 41 | Colored | 7,797 | 226 | 45 | 42 | 345 | 42 | 44 | 406 | ........ | 34 | 1,406 | 676 | 92 |
| 42 | Attending daily from every 100 enrolled | 68.4 | 67.9 | 66.4 | 66.7 | 66.4 | 67.2 | 68.7 | 63.5 | 60.1 | 61.6 | 57.4 | 60.1 | 67.6 |
| 43 | White | 68.5 | 68.2 | 66.4 | 66.6 | 66.4 | 67.0 | 68.7 | 66.2 | 60.1 | 61.5 | 55.3 | 59.6 | 67.7 |
| 44 | Colored | 66.8 | 64.7 | 76.2 | 70.0 | 70.6 | 76.3 | 70.9 | 55.9 | ........ | 72.3 | 63.5 | 64.0 | 65.2 |
| 45 | Attending daily from every 100 of population 6 to 20 | 49.0 | 45.1 | 49.9 | 52.4 | 49.1 | 46.1 | 46.9 | 35.6 | 39.8 | 47.9 | 34.9 | 45.7 | 46.1 |
| 46 | Length of session, in days | 137 | 174 | 120 | 125 | 133 | 115 | 112 | 180 | 120 | 120 | 160 | 120 | 137 |
| 47 | Days each child enrolled attended | 93.7 | 118.1 | 79.6 | 83.3 | 88.8 | 77.2 | 76.9 | 114.3 | 72.1 | 73.9 | 91.8 | 72.1 | 92.6 |
| 48 | Days each child 6 to 20 years of age attended | 67.1 | 78.4 | 59.8 | 65.5 | 65.3 | 53.0 | 52.5 | 64.0 | 47.7 | 57.4 | 55.8 | 54.8 | 63.1 |
| 49 | Teachers | 9,312 | 131 | 99 | 85 | 251 | 129 | 98 | 78 | 145 | 107 | 230 | 279 | 125 |
| 50 | Enrollment per teacher | 30 | 33 | 29 | 23 | 25 | 21 | 22 | 35 | 34 | 35 | 36 | 34 | 28 |
| 51 | Teachers' salaries | $2,977,722 | $50,589 | $26,160 | $20,415 | $62,547 | $26,020 | $19,737 | $34,936 | $38,277 | $31,578 | $104,467 | $99,572 | $42,621 |
| 52 | Average annual salary | $319 | $386 | $264 | $240 | $249 | $201 | $201 | $447 | $265 | $295 | $454 | $356 | $340 |
| 53 | Teachers with normal or collegiate training | 914 | 21 | 1 | 0 | 13 | 2 | 5 | 33 | 3 | 7 | 46 | 44 | 2 |
| 54 | Per cent of teachers with normal or collegiate training | 9.8 | 16.0 | 1.0 | 0 | 5.1 | 1.5 | 5.1 | 42.3 | 2.0 | 6.5 | 20.0 | 15.7 | 1.6 |
| 55 | Third-grade certificates | 1,271 | 15 | 18 | 15 | 38 | 27 | 16 | 8 | 33 | 19 | 30 | 36 | 17 |
| 56 | Per cent of third-grade certificates | 13.6 | 11.4 | 18.1 | 17.6 | 15.1 | 20.9 | 16.3 | 10.2 | 22.9 | 17.7 | 13.0 | 12.9 | 13.6 |
| 57 | Total school expenditures | $5,081,602 | $75,005 | $40,465 | $28,787 | $90,743 | $36,132 | $27,180 | $54,727 | $63,372 | $64,258 | $175,423 | $156,764 | $63,323 |
| 58 | Amount received from the State | $732,456 | $8,662 | $6,653 | $8,729 | $19,059 | $14,846 | $10,963 | $7,956 | $12,487 | $8,595 | $18,301 | $24,500 | $9,127 |
| 59 | Per cent received from the State | 14.4 | 11.5 | 16.4 | 30.3 | 21.0 | 41.0 | 39.9 | 14.5 | 19.7 | 13.3 | 10.4 | 14.3 | 14.4 |
| 60 | Expenditure per child enrolled | $17.84 | $16.90 | $13.80 | $14.24 | $14.34 | $13.15 | $12.57 | $19.94 | $12.62 | $15.12 | $20.74 | $16.49 | $17.54 |
| 61 | Expenditure per child 6 to 20 years of age | $12.80 | $11.23 | $10.37 | $11.20 | $10.60 | $9.02 | $8.57 | $11.18 | $8.36 | $11.77 | $12.62 | $11.39 | $11.97 |
| 62 | Per cent of total expenditures used for teachers' salaries | 58.6 | 67.4 | 64.6 | 70.9 | 68.9 | 72.0 | 72.6 | 63.8 | 60.4 | 49.1 | 59.4 | 63.5 | 67.3 |
| 63 | Tuition per child enrolled | $10.45 | $11.39 | $8.91 | $10.08 | $9.87 | $9.46 | $9.12 | $12.71 | $7.62 | $7.41 | $12.31 | $10.46 | $11.79 |
| 64 | Tuition per child 6 to 20 years of age | $7.50 | $7.56 | $6.70 | $7.51 | $7.30 | $6.49 | $6.22 | $7.13 | $5.04 | $5.77 | $7.49 | $7.22 | $8.04 |
| 65 | Value of school buildings | $9,367,690 | $145,270 | $43,955 | $34,565 | $110,196 | $28,668 | $19,485 | $70,895 | $75,305 | $76,860 | $204,725 | $370,083 | $106,780 |
| 66 | Average value of school building | $1,379 | $1,750 | $482 | $460 | $567 | $227 | $207 | $1,446 | $588 | $998 | $1,392 | $1,979 | $1,209 |
| 67 | School libraries | 3,912 | 90 | 42 | 43 | 121 | 57 | 57 | 37 | 37 | 14 | 76 | 54 | 86 |
| 68 | Number of volumes in libraries | 314,430 | 3,658 | 2,127 | 3,952 | 6,036 | 1,152 | 1,686 | 3,490 | 2,174 | 901 | 4,218 | 2,255 | 5,875 |
| 69 | Average number of volumes in libraries | 80 | 40 | 50 | 91 | 49 | 20 | 29 | 94 | 58 | 64 | 55 | 41 | 68 |
| 70 | Circulating libraries used[1] | | | | | | | | | | | | | |
| 71 | Number of high schools | 109 | 2 | 1 | 0 | 2 | 0 | 0 | 1 | 0 | 1 | 2 | 3 | 2 |
| 72 | Enrolled in high school from each 100 of population 6 to 20[1] | | | | | | | | | | | | | |

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[1] No data.

*School statistics of West Virginia*—Continued.

[The mountain counties are in *italic*.]

| | | Mingo County. | *Monroe* County. | Morgan County. | Nicholas County. | *Pendleton* County. | *Pocahontas* County. | Raleigh County. | Randolph County. | Summers County. | Tucker County. | Wayne County. | *Webster* County. | *Wyoming* County. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Population: | | | | | | | | | | | | | |
| 1 | Total | 19,431 | 13,055 | 7,848 | 17,699 | 9,349 | 14,740 | 25,633 | 26,028 | 18,420 | 18,675 | 24,081 | 9,680 | 10,392 |
| 2 | White | 18,195 | 12,382 | 7,671 | 17,649 | 9,217 | 14,295 | 23,581 | 25,650 | 17,288 | 18,331 | 23,912 | 9,672 | 10,287 |
| 3 | Colored | 1,236 | 673 | 177 | 48 | 132 | 445 | 2,052 | 376 | 1,130 | 344 | 169 | 8 | 105 |
| 4 | Per cent colored | 6.4 | 5.2 | 2.3 | 0.3 | 1.4 | 3.0 | 8.0 | 1.4 | 6.1 | 1.8 | 0.7 | 0.1 | 1.0 |
| 5 | Foreign white | 1,197 | 10 | 172 | 705 | 6 | 808 | 1,525 | 2,061 | 140 | 3,010 | 51 | 97 | 17 |
| 6 | Per cent foreign white | 6.2 | 0.1 | 2.2 | 4.0 | 0.1 | 4.0 | 5.9 | 7.9 | 0.8 | 16.1 | 0.2 | 1.0 | 0.2 |
| 7 | Native white of native parentage | 16,627 | 12,312 | 7,318 | 16,594 | 9,193 | 13,110 | 21,597 | 22,013 | 16,902 | 13,904 | 23,696 | 9,410 | 10,247 |
| 8 | Per cent of native white of native parentage | 85.6 | 94.3 | 93.2 | 93.8 | 98.3 | 88.9 | 84.3 | 84.6 | 91.8 | 74.5 | 98.4 | 97.2 | 98.6 |
| 9 | Urban | 3,561 | .......... | .......... | 3,061 | .......... | .......... | .......... | 5,260 | 3,656 | 2,615 | .......... | .......... | .......... |
| 10 | Rural | 15,870 | 13,055 | 7,848 | 14,638 | 9,349 | 14,740 | 25,633 | 20,768 | 14,764 | 16,060 | 24,081 | 9,680 | 10,392 |
| 11 | Of largest city or village | 3,561 | 575 | 864 | 3,061 | 200 | 1,045 | 2,161 | 5,260 | 3,656 | 2,615 | 1,215 | 500 | 334 |
| 12 | Rural, per square mile | 38.1 | 28.6 | 33.7 | 21.5 | 13.4 | 16.3 | 42.9 | 20.0 | 40.0 | 39.7 | 46.6 | 16.6 | 20.7 |
| 13 | Area, square miles | 416 | 457 | 333 | 680 | 699 | 904 | 597 | 1,036 | 369 | 405 | 517 | 583 | 502 |
| 14 | Average area (square miles) to each white school | 4.1 | 3.6 | 5.4 | 4.7 | 7.2 | 8.3 | 3.2 | 4.8 | 2.7 | 5.0 | 3.2 | 5.8 | 5.3 |
| 15 | Number of white schools | 100 | 124 | 61 | 144 | 97 | 108 | 182 | 214 | 137 | 80 | 160 | 100 | 94 |
| 16 | Schools necessary to provide 1 for each 12 square miles | 35 | 39 | 28 | 57 | 69 | 76 | 50 | 87 | 31 | 34 | 44 | 49 | 42 |
| 17 | Population 6 to 20 years of age, per school | 62 | 33 | 41 | 42 | 32 | 40 | 44 | 28 | 34 | 50 | 44 | 27 | 29 |
| 18 | Population 6 to 20 years of age for each 12 square miles | 187 | 114 | 93 | 109 | 46 | 59 | 171 | 70 | 160 | 122 | 167 | 55 | 67 |
| 19 | One-teacher schools | 71 | 125 | 40 | 134 | 93 | 94 | 177 | 139 | 136 | 66 | 152 | 92 | 85 |
| 20 | Per cent of one-teacher schools | 67 | 94 | 63 | 93 | 93 | 84 | 90 | 64 | 94 | 80 | 91 | 92 | 89 |
| 21 | Population 10 years of age and over | 13,986 | 9,718 | 5,893 | 12,780 | 6,839 | 10,748 | 18,108 | 18,975 | 13,268 | 13,584 | 16,579 | 6,625 | 6,933 |
| 22 | Illiterate | 2,738 | 522 | 323 | 680 | 675 | 796 | 1,892 | 1,533 | 936 | 1,584 | 1,808 | 565 | 855 |
| 23 | Per cent of illiterate | 19.6 | 5.4 | 5.5 | 5.3 | 9.9 | 7.4 | 10.4 | 8.1 | 7.1 | 11.7 | 10.9 | 8.5 | 12.3 |
| 24 | Native white 10 years of age and over | 11,749 | 9,211 | 5,580 | 12,071 | 6,737 | 9,623 | 15,086 | 16,680 | 12,238 | 10,427 | 16,406 | 6,520 | 6,833 |
| 25 | Illiterate | 1,920 | 404 | 292 | 549 | 656 | 473 | 1,228 | 889 | 780 | 461 | 1,783 | 560 | 817 |
| 26 | Per cent of illiterate | 16.3 | 4.4 | 5.2 | 4.5 | 9.7 | 4.9 | 8.1 | 5.3 | 6.4 | 4.4 | 10.9 | 8.6 | 12.0 |
| 27 | Population 10 to 20 years of age | 4,688 | 3,175 | 1,889 | 4,322 | 2,282 | 3,134 | 5,965 | 5,783 | 4,522 | 4,080 | 6,249 | 2,426 | 2,731 |
| 28 | Illiterate | 531 | 63 | 59 | 139 | 111 | 137 | 367 | 285 | 161 | 233 | 322 | 78 | 174 |
| 29 | Per cent of illiterate | 11.3 | 2.0 | 3.1 | 3.2 | 4.9 | 4.4 | 6.2 | 5.0 | 3.6 | 5.8 | 5.2 | 3.2 | 6.4 |
| 30 | Population 6 to 20 years of age | 6,576 | 4,452 | 2,626 | 6,122 | 3,214 | 4,504 | 8,588 | 8,160 | 6,436 | 5,759 | 9,054 | 3,509 | 3,985 |
| 31 | School enrollment | 5,288 | 3,381 | 1,969 | 4,381 | 2,430 | 2,816 | 6,473 | 6,093 | 4,968 | 4,157 | 7,348 | 2,725 | 2,824 |
| 32 | Enrolled from every 100 of population 6 to 20 | 80.4 | 75.9 | 74.9 | 71.5 | 75.6 | 62.5 | 75.3 | 74.0 | 77.1 | 72.1 | 81.1 | 77.6 | 70.3 |
| 33 | White enrollment | 5,141 | 3,204 | 1,937 | 4,381 | 2,395 | 2,750 | 5,971 | 5,997 | 4,692 | 4,095 | 7,317 | 2,725 | 2,804 |
| 34 | Colored enrollment | 147 | 177 | 32 | .......... | 35 | 66 | 502 | 96 | 266 | 62 | 31 | .......... | 20 |
| 35 | Private schools[1] | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... | .......... |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 36 | Private school enrollment in elementary and high schools[1] | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... |
| 37 | Public and private school enrollment[1] | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... |
| 38 | Per cent enrolled in private schools[1] | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... |
| | PUBLIC SCHOOLS. | | | | | | | | | | | | | |
| 39 | Average school attendance | 3,759 | 2,336 | 1,376 | 3,104 | 1,668 | 2,392 | 4,086 | 4,632 | 3,171 | 2,841 | 5,038 | 1,873 | 1,750 |
| 40 | White | 3,670 | 2,219 | 1,345 | 3,104 | 1,641 | 2,340 | 3,772 | 4,569 | 2,983 | 2,801 | 5,021 | 1,873 | 1,737 |
| 41 | Colored | 89 | 117 | 31 | ......... | 27 | 50 | 314 | 63 | 188 | 40 | 17 | ......... | 13 |
| 42 | Attending daily from every 100 enrolled | 71.0 | 69.0 | 69.8 | 70.8 | 68.6 | 84.9 | 63.1 | 76.0 | 63.8 | 68.3 | 68.5 | 68.7 | 61.9 |
| 43 | White | 71.3 | 69.2 | 69.4 | 70.8 | 68.4 | 85.0 | 63.1 | 76.1 | 63.5 | 68.4 | 68.6 | 68.7 | 61.9 |
| 44 | Colored | 60.5 | 66.1 | 96.8 | ......... | 77.1 | 75.7 | 62.5 | 65.6 | 70.6 | 64.5 | 54.8 | ......... | 65.0 |
| 45 | Attending daily from every 100 of population 6 to 20 | 57.0 | 52.3 | 52.2 | 50.6 | 50.3 | 53.0 | 47.5 | 56.2 | 49.1 | 49.2 | 55.5 | 53.3 | 43.5 |
| 46 | Length of session, in days | 137 | 130 | 130 | 120 | 106 | 133 | 114 | 126 | 121 | 140 | 127 | 110 | 120 |
| 47 | Days each child enrolled attended | 97.2 | 89.7 | 90.7 | 84.9 | 72.7 | 112.9 | 71.9 | 95.7 | 77.1 | 95.6 | 86.3 | 75.5 | 74.2 |
| 48 | Days each child 6 to 20 years of age attended | 78.0 | 67.9 | 67.8 | 60.7 | 53.2 | 70.4 | 54.1 | 70.8 | 59.4 | 68.8 | 69.9 | 58.6 | 52.2 |
| 49 | Teachers | 132 | 135 | 62 | 154 | 104 | 133 | 213 | 217 | 172 | 129 | 197 | 109 | 106 |
| 50 | Enrollment per teacher | 40 | 25 | 31 | 28 | 23 | 21 | 30 | 28 | 28 | 32 | 37 | 25 | 26 |
| 51 | Teachers' salaries | $58,648 | $28,709 | $17,010 | $36,820 | $19,816 | $40,815 | $53,494 | $65,877 | $48,634 | $45,732 | $54,930 | $22,129 | $29,232 |
| 52 | Average annual salary | $444 | $212 | $274 | $239 | $190 | $306 | $251 | $303 | $282 | $354 | $278 | $203 | $275 |
| 53 | Teachers with normal or collegiate training | 9 | 7 | 4 | 1 | 1 | 10 | 4 | 17 | 11 | 19 | 12 | 5 | 3 |
| 54 | Per cent of teachers with normal or collegiate training | 6.8 | 5.1 | 6.4 | 0.6 | 0.9 | 7.5 | 1.8 | 7.8 | 6.3 | 14.7 | 6.0 | 4.5 | 2.8 |
| 55 | Third-grade certificates | 9 | 23 | 8 | 18 | 25 | 22 | 43 | 32 | 45 | 19 | 32 | 30 | 25 |
| 56 | Per cent of third-grade certificates | 6.8 | 17.0 | 12.9 | 11.6 | 24.0 | 16.5 | 20.1 | 14.7 | 26.1 | 14.7 | 16.2 | 27.5 | 23.5 |
| 57 | Total school expenditures | $94,846 | $39,687 | $28,870 | $57,777 | $27,154 | $103,843 | $80,501 | $101,755 | $70,376 | $66,825 | $79,894 | $36,852 | $53,246 |
| 58 | Amount received from the State | $11,489 | $14,403 | $6,005 | $11,036 | $11,568 | $7,476 | $14,980 | $12,668 | $17,358 | $12,369 | $19,233 | $7,636 | $6,510 |
| 59 | Per cent received from the State | 12.1 | 36.2 | 20.8 | 19.7 | 42.6 | 7.2 | 18.6 | 12.4 | 24.6 | 18.5 | 24.0 | 20.6 | 12.2 |
| 60 | Expenditure per child enrolled | $17.93 | $11.73 | $14.66 | $13.19 | $11.18 | $26.18 | $12.43 | $16.66 | $14.19 | $16.07 | $10.87 | $13.89 | $18.85 |
| 61 | Expenditure per child 6 to 20 years of age | $14.41 | $8.90 | $10.97 | $9.40 | $8.45 | $16.36 | $9.35 | $12.32 | $10.93 | $11.58 | $8.80 | $10.76 | $13.24 |
| 62 | Per cent of total expenditures used for teacher's salaries | 61.8 | 72.3 | 58.9 | 63.7 | 72.9 | 39.3 | 66.4 | 64.7 | 69.1 | 68.4 | 68.5 | 60.0 | 54.9 |
| 63 | Tuition per child enrolled | $11.07 | $8.47 | $8.62 | $8.39 | $8.14 | $10.28 | $8.24 | $10.77 | $9.80 | $10.98 | $7.43 | $8.33 | $10.36 |
| 64 | Tuition per child 6 to 20 years of age | $8.89 | $6.43 | $6.46 | $5.98 | $6.16 | $6.42 | $6.20 | $7.96 | $7.55 | $7.91 | $6.02 | $6.45 | $7.26 |
| 65 | Value of school buildings | $147,950 | $43,552 | $39,554 | $52,405 | $16,168 | $68,207 | $44,927 | $197,970 | $124,034 | $144,872 | $109,580 | $42,178 | $40,180 |
| 66 | Average value of school building | $1,454 | $345 | $841 | $382 | $170 | $598 | $267 | $965 | $892 | $1,810 | $672 | $409 | $410 |
| 67 | School libraries | 32 | 71 | 23 | 48 | 43 | 75 | 90 | 91 | 48 | 46 | 67 | 52 | 8 |
| 68 | Number of volumes in libraries | 1,787 | 2,736 | 1,704 | 2,243 | 2,183 | 3,858 | 3,974 | 4,911 | 2,892 | 4,887 | 3,913 | 3,546 | 220 |
| 69 | Average number of volumes in libraries | 55 | 38 | 74 | 46 | 50 | 51 | 40 | 53 | 61 | 106 | 58 | 68 | 27 |
| 70 | Circulating libraries used[1] | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... |
| 71 | Number of high schools | 3 | 2 | 4 | 1 | 0 | 2 | 0 | 6 | 1 | 4 | 1 | 2 | 2 |
| 72 | Enrolled in high school from each 100 of population 6 to 20[1] | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... | ......... |

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[1] No data.

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# HISTORY OF PUBLIC SCHOOL EDUCATION IN ALABAMA

eauregard

By STEPHEN B. WEEKS

OF THE BUREAU OF EDUCATION

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# LETTER OF TRANSMITTAL.

Department of the Interior,
Bureau of Education,
*Washington, February 19, 1915.*

Sir: I submit herewith for publication as a bulletin of the Bureau of Education a brief account of the progress of education in the State of Alabama. This is the second in the series of brief histories of education in some of the States of the Union which this bureau is having prepared by and under the direction of Dr. Stephen B. Weeks, of this bureau, for the purpose of providing accurate information for the future historian, and the still more important purpose of helping those who are now working for the improvement of education in the States, as set forth in my letter transmitting the manuscript of Bulletin, 1912, No. 27.

Respectfully submitted.

P. P. Claxton,
*Commissioner.*

The Secretary of the Interior.

## ACKNOWLEDGMENTS.

The compiler wishes to acknowledge with thanks many courtesies which he has received from citizens of Alabama during the preparation of this bulletin. Supt. John H. Phillips, of Birmingham; Mr. Henry J. Willingham, now president of the State Normal School at Florence; and Mr. William F. Feagin, the present State superintendent, courteously answered numerous questions; Hon. John W. Abercrombie and Mr. Isaac W. Hill, former State superintendents, read parts of the paper and offered suggestions, while Mr. Thomas M. Owen, LL.D., director of the State department of archives and history, put the historical material in his office, including many pamphlets in the Curry Collection and the original manuscript letter books of the State superintendents down to 1873, at the service of the writer. Dr. Owen also read the manuscript and freely gave the benefits of his very wide knowledge of the subject.

# HISTORY OF PUBLIC SCHOOL EDUCATION IN ALABAMA.

## Chapter I.

### EVOLUTION OF THE STATE.

The territory included within the present State of Alabama lies between 30° 13′ and 35° north latitude and between 84° 51′ and 88° 31′ west longitude. It has a total land and water area of 51,998 square miles, and was first visited by De Narvaez and later explored by De Soto (1540); but the Spaniards made no attempt at settlement and for more than a hundred years there was no other visit to the territory by white men. Then came La Salle, with his idea of a French empire extending through the heart of North America, the Mississippi to be the main artery of commerce, and a chain of forts to connect Canada and Louisiana (1682). Under the impetus of this idea came the settlement at Biloxi in 1699 and that at Twenty-seven Mile Bluff, on Mobile River in 1702. In 1711 this latter settlement was moved to the present site of Mobile. This removal marks the real beginning of European settlement in that section of the United States, and Mobile was for years the center of French opposition to the westward thrust of the English-speaking peoples from Georgia and the Carolinas.

It should be noted that the Spaniards never formally surrendered their claims to the country now represented by the State of Alabama, but included it within the ill-defined boundaries of Florida, and that the English made a similar claim to it as a part of their province of Carolana, "the east of Carolana joining to the west of Carolina," according to Coxe, who was the leading exponent of the English contention; but the French remained in actual possession of the soil till the peace of Paris in 1763, by the terms of which Canada and all of that part of Louisiana east of the Mississippi River, with the exception of the island of Orleans, was ceded to England, and the city of New Orleans with all of Louisiana west of the river to Spain. By these cessions France was forced out of the Continent of North America, and the visions of La Salle's American empire vanished.

By a treaty of 1762 East and West Florida had been ceded by Spain to England in exchange for Havana, and the English flag then waved over all the territory of North America east of the Mississippi except the city of New Orleans.

In reorganizing the territory of West Florida the English in 1767 extended its boundary northward to the line of 32° 28′, about the latitude of the present city of Montgomery. The territory north of 32° 28′ was included in the English province of Illinois. During the American Revolution, Bernardo Galvez, Spanish governor of Louisiana, captured both Pensacola and Mobile, and by the treaty of Versailles in 1783 the Floridas were retroceded to Spain by England, which at the same time acknowledged the southern boundary of the United States to run down to 31°, thus ignoring her own boundary of West Florida and bequeathing a bone of contention to the United States and Spain. This territory remained a subject of dispute till 1795, when under the Jay treaty Spain acknowledged the American contention for 31°, although it was not till 1798 that the Spanish colonial officials were forced to yield recognition of the treaty. By the Federal act of April 7, 1798, a territorial government was established for the Mississippi Territory then embraced between 31° and 32° 28′, of like character in all respects to that over the Northwest Territory, save as to the last ordinance (slavery). A commission was provided by the act for settling the contention between the United States and the State of Georgia over all lands lying north of 31° and south of the South Carolina cession of 1787 which Georgia claimed as a part of her territory under the original charter of Oglethorpe. In 1802 Georgia ceded to the United States all her claims to this territory; and in 1804 the territory between 32° 28′ and 35°, including the strip of land 12 miles wide known as the South Carolina cession, was annexed to the Mississippi Territory. In 1812 Congress added to that Territory what was known as the district of Mobile, being the lands between the Pearl and the Perdido Rivers, recently taken from Spain and extending from the Gulf northward to Ellicott's line in 31°. By act of March 3, 1817, the Territory of Alabama was established by Congress, with boundaries corresponding to those of the present State. This Territory was admitted as a State of the Union by the act of Congress of March 2 and resolution of December 14, 1819.

The growth in population has been as follows:

*Statistical view of growth of Alabama population, 1800–1910.*

| Years. | White. | Colored. | Total. | Per cent of increase since last census. | Population per square mile.[1] |
|---|---|---|---|---|---|
| 1800 | ........ | ........ | [2] 1,250 | ........ | ........ |
| 1810 | ........ | ........ | 9,046 | ........ | ........ |
| 1818 | ........ | ........ | [3] 25,000 | ........ | ........ |
| 1820 | 85,451 | 42,450 | 127,901 | ........ | 2.49 |
| 1830 | 190,406 | 119,121 | 309,527 | 142.00 | 6.03 |
| 1840 | 335,185 | 255,571 | 590,756 | 90.86 | 11.52 |
| 1850 | 426,514 | 345,109 | 771,623 | 80.62 | 15.05 |
| 1860 | 526,271 | 437,770 | 964,201 | 24.98 | 18.80 |
| 1870 | 521,384 | 475,510 | 996,992 | 3.40 | 19.44 |
| 1880 | 662,185 | 600,103 | 1,262,505 | 26.63 | 24.62 |
| 1890 | 833,718 | 678,489 | 1,513,401 | 19.87 | 29.51 |
| 1900 | 1,001,152 | [4] 827,307 | 1,828,697 | 20.83 | 85.66 |
| 1910 | 1,228,832 | [4] 908,282 | 2,138,093 | 16.92 | 41.67 |

[1] In 1910 land area 51,279 square miles.
[2] Mississippi Territory.
[3] In Washington County, Ala., only. Pickett.
[4] Excludes a few Indians, Chinese, and Japanese.

The sources of this population, as far as it concerns the older States, are shown for different decades in the following table, which includes every State which has in any decade contributed as much as 1,000 to the State's population.

*Statistical view of the sources of Alabama's population.*

| States. | 1850 | 1860 | 1870 | 1880 | 1890 | 1900 |
|---|---|---|---|---|---|---|
| Georgia | 58,997 | 83,517 | 93,028 | 95,872 | 95,875 | 99,654 |
| South Carolina | 48,663 | 45,185 | 42,971 | 35,764 | 24,355 | 18,921 |
| Tennessee | 22,541 | 19,139 | 19,797 | 23,859 | 25,185 | 31,035 |
| North Carolina | 28,521 | 23,504 | 30,290 | 23,269 | 15,491 | 12,102 |
| Virginia (and West Virginia) | 10,387 | 7,598 | 29,635 | 24,351 | 16,232 | 15,320 |
| Mississippi | 2,852 | 4,848 | 10,149 | 13,046 | 15,009 | 20,256 |
| Florida | 1,060 | 1,644 | 2,764 | 4,029 | 3,969 | 5,924 |
| Kentucky | 2,694 | 1,966 | 2,580 | 2,624 | 3,983 | 4,207 |
| New York | 1,443 | 1,848 | 1,539 | 1,668 | 2,086 | 2,109 |
| Ohio | 276 | 265 | 682 | 1,477 | 3,764 | 4,020 |
| Louisiana | 628 | 1,149 | 1,753 | 1,785 | 2,286 | 2,750 |
| Pennsylvania | 876 | 989 | 727 | 1,199 | 2,318 | 2,533 |
| Maryland | 757 | 683 | 2,209 | 1,889 | 1,483 | 1,121 |
| Texas | 55 | 275 | 640 | 1,254 | 1,822 | 3,230 |
| Illinois | 114 | 224 | 369 | 686 | 1,374 | 2,675 |
| Indiana | 93 | 186 | 278 | 785 | 1,741 | 2,171 |
| Arkansas | 91 | 343 | 650 | 863 | 1,094 | 2,053 |
| Missouri | 158 | 191 | 516 | 572 | 861 | 1,303 |

Assuming these figures to be correct, and a proper foundation on which to base generalizations, it is evident that in the development of Alabama immigration has come primarily from the States immediately adjoining; that it has been in direct proportion to distance; that it has been in this case, as in most others, in the main along lines of latitude; that the population coming into Alabama in the early days was distinctively southern, and that it was not till 1890 that an increase in the northern and western elements began to command attention.

The States that seem to have contributed most to the population of Alabama are, in the order of importance: Georgia, South Carolina, Tennessee, North Carolina, and Virginia; these States in the four censuses between 1850 and 1880, stand with three exceptions in the above order. Two of them, Georgia and Tennessee, represent a migration from the neighboring older States, Virginia and the Carolinas. It is probable that an overwhelming per cent of the Alabama population of the ante bellum period traced its origin directly or indirectly to Virginia and the Carolinas, as is shown by the following tables:

| | | |
|---|---|---|
| Total population Alabama, 1850 | | 428,779 |
| Born in the State | 236,332 | |
| Born out of State, but in United States | 183,913 | |
| Born in foreign countries | 7,509 | |
| Birthplace unknown | 1,025 | |
| | | 428,779 |
| Born outside of State, but in United States | | 183,913 |
| Born in— | | |
| Georgia | 58,997 | |
| South Carolina | 48,663 | |
| North Carolina | 28,521 | |
| Tennessee | 22,541 | |
| Virginia | 10,387 | |
| | | 169,132 |
| Born in foreign countries | | 7,509 |
| Born in— | | |
| England | 941 | |
| Ireland | 3,639 | |
| Scotland | 584 | |
| Wales | 67 | |
| Germany and Prussia | 1,112 | |
| France | 503 | |
| Austria | 33 | |
| Switzerland | 113 | |
| Denmark, Norway, and Sweden | 74 | |
| British America | 49 | |
| | | 7,115 |

It is thus evident that the States which in the decade between 1840 and 1850 made the largest contribution to Alabama's population furnished no new ethnic elements; and that the foreign contribution was neither sufficient in size, nor sufficiently different in character, to produce variation in type. There was in general large racial homogeneity.

It may be interesting to inquire at this point how and along what lines of travel, and over what roads, these immigrants got into Alabama. If the lines of travel and the location of earliest settlement are known, these facts will help explain why certain sections were in advance of others in the organization of schools.

After the province of Louisiana came into the hands of the English as a result of the Treaty of Paris in 1763, they began to encourage immigration, and the first immigrants found homes not in what is now Alabama, but in Mississippi, coming by water up the river from New Orleans or by water down the Ohio and Mississippi from the older colonies on the Atlantic coast.

The historian Pickett, writing of the period from 1768 to 1773, says:

> The English authorities encouraged emigration and many availed themselves of their liberal offer. The first Anglo-American colony came from Roanoke, in the province of North Carolina, and established themselves between Manchac and Baton Rouge. They were followed by others from North and South Carolina, who crossed the mountains to Tennessee, there constructing flatboats, descended that river into the Ohio and thence passed down the Mississippi. Others from Georgia even cut through the wilderness to find the Natchez country, which had become so favorably known. Emigrants from Virginia came down the Ohio. They all received upon their arrival liberal and extensive grants. After a while emigrants came from Great Britain, Ireland, and the British West Indies. During the three succeeding years many flocked from Georgia, the Carolinas, and New Jersey, and established themselves upon the soil by the Bayou Sara, the Homochitto, and Bayou Pierre. All these settlements extended from the Mississippi back for 15 or 20 miles. A few years afterwards the Scotch Highlanders from North Carolina arrived, and formed a colony upon the upper branch of the Homochitto, 30 miles eastward of Natchez, and their members were at a late period increased by others from Scotland. * * * In 1770 emigrants came from New Jersey, Delaware, and Virginia, by the way of the Ohio, and three years afterwards a much greater number advanced by that route.[1]

In order to get a clearer conception of the growth of the Alabama country itself, it is desirable to point out (1) the four separate settlements within the present Alabama from which as nuclei the State has developed and (2) to indicate briefly the lines of travel by which these settlements were reached:

(1) In the early days territorial Alabama was made up of four distinct districts, based on the river systems to which they belonged.

(*a*) The oldest of these settlements was, of course, that at Mobile, which was founded by the French and later developed by the English and Spaniards. These settlers came by water. Later, Americans appeared and settled above and around Mobile in what is now Baldwin, Mobile, and Washington Counties, even before all of this had become American territory. In 1792, after Mobile itself, the most populous of these settlements was that upon the Tensas River. It was composed of both Whigs and Loyalists, the latter having been driven from Georgia and the Carolinas. This settlement was reached overland from Georgia, the creeks and rivers being passed on rafts, and household and other utensils being carried on pack horses.

(*b*) Next after Mobile came the American settlements on the Tombigbee River in the vicinity of old St. Stephens. This section contained the oldest American settlement in the State, and included a settlement of Georgians on the Alabama, a few miles above its confluence with the Tombigbee. This was made in 1777 and is believed to be one of the earliest settlements within the present limits of the State. The settlers had come overland through the Creek country from Georgia. In 1800 these settlements were included within the limits of Washington County, Mississippi Territory (now in Alabama), and a ferry across the Alabama River over Nannahubba Island, which facilitated the movements of immigrants, had been established as early as 1797. After the opening of the Federal Road the ferry was moved farther north.

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[1] Pickett's Alabama, Owen's ed., pp. 322-323.

From the time that the claims of Georgia to the Mississippi Territory were extinguished (1804), immigrants began to flock into what is now Alabama. One party left North Carolina, scaled the Blue Ridge with their wagons, and descended into the valley of the Tennessee. At Knoxville they built flatboats and floated down the river to the Muscle Shoals, where they disembarked their goods, placed them on pack horses which had been brought overland from Knoxville, and from the Muscle Shoals as a new basis, departed overland for the English settlements on the Tombigbee, about St. Stephens, in southern Alabama, thus traversing in a journey of 120 days from North Carolina nearly the whole length of the present State from north to south.[1]

(*c*) The northern section of Alabama, the Tennessee Valley region, was settled mainly from Tennessee as early as 1787, and in the earlier period filled up more rapidly than some of the other sections. These immigrants came overland from the Cumberland settlements or floated down the river in flatboats from the settlements farther east.

(*d*) The fourth district was that along the Alabama River, with centers near Claiborne, in Monroe County, and along the Alabama River from the confluence of the Coosa and Tallapoosa Rivers down to and including the present city of Montgomery. This section was settled mainly by Georgians and Carolinians, who came in over the Government Road. From these four centers population grew and extended into the intervening sections.

(2) The lines of travel by which immigrants went into this new territory are indicated as follows: The Indians—the Creeks, Cherokees, Chickasaws, and Choctaws—had some well-defined trails through this country, and while these trails varied somewhat from one period to another they became in the main the basis of the routes for the French and English invasion. These Indian trails were followed by Indian traders and these in turn by the first immigrants, and in this perfectly natural way became the highways along which passed the settlers seeking new homes.

It will be sufficient to consider these highways under the general division of northern and eastern roads. The northern route led down the Tennessee River from Knoxville to the neighborhood of the Muscle Shoals. From the Shoals immigrants from Virginia and North Carolina, after floating down the Tennessee, went across the country with pack horses along the route later known as Gaines's Trace until they struck the Tombigbee at Cotton Gin Port in the present Monroe County, Miss., and thence to St. Stephens by water. On the other hand, others, instead of taking to the Tombigbee route, left Gaines's Trace and went south by land over the open prairie.

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[1] Pickett's Alabama, Owen's ed., pp. 466–467.

In 1801 the Government secured by treaty with the Chickasaws and the Choctaws the right to open a road from the Nashville country to the Natchez district. This road crossed the Tennessee River at Colbert's Ferry and was also utilized by immigrants coming into Alabama from the Tennessee country. About 1805 the Government acquired from the Cherokees the right of way for a road from Knoxville down the river. This road crossed the Tennessee at the Muscle Shoals and then joined the Natchez Trace.

The other great route was that which led to central Alabama from Georgia. It was secured by treaty with the Creeks in 1805. This route did not differ essentially from the older trade routes that in turn followed the Indian trails. The one leading to Alabama struck Georgia at Augusta, crossed the Savannah there, and branching, turned north and northwest to the Cherokee and Creek country. Another branch turned west to the territory of the Lower Creeks which it struck at the Ocmulgee. It passed old Fort Hawkins (near Macon) and thence to the Chattahoochee not far from the present Columbus, Ga. It passed to the south of Montgomery, along what is now the eastern boundary of Monroe County, to old Fort Mims, from which one arm reached out to Mobile at the south and the other to St. Stephens farther west, whence it passed on across the Choctaw country to Natchez. In the early days this road was in reality a mere trail—marked by three notches cut in the trees. The houses of accommodation were few in number and indifferent in kind, being kept by Indians and halfbreeds. The rivers and creeks were unbridged and without ferries.[1]

With the improvement of the road by the Federal Government, the use of this route much increased. Hamilton says[2] it became for Alabama what the Via Appia was for the country south of Rome, and Pickett tells us that by 1810 the population of Washington County, Ala., was about 6,000, made up of Georgians and Carolinians who had come in over the "Three Chopped Way" from the east, and of Tennesseeans who had come down from the north.

Jackson's military road cut southwardly from the Tennessee River into the Creek country of eastern Alabama, and the "great

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[1] Pickett's Alabama, Owen's ed., 486.

[2] See Hamilton's article on early roads in Alabama, Publications Alabama Historical Society, II, 39-56.

Tennessee road" to Jones's valley in Jefferson County made access to the north easier still. But these roads belong to the later period of development and growth, rather than to the earlier one of exploration and settlement.

In the Memorial Record of Alabama Mr. Thomas H. Clark calls attention to the boat as an emblem of progress during the earlier days. This may be illustrated by the history of 90 barrels of flour sold in Montgomery in 1822. This flour was made from wheat grown in Washington County, Va., was ground on the Holston River 10 miles away, floated 150 miles down that river on flatboats, then 40 miles up the Hiwassee, then 10 miles up the Okoa (Ocoee) to Hildebrand's Landing, then 12 miles by portage across country to O'Dear's, on the Connussowga,[1] thence by flatboat again into the Coosa, and thence to Montgomery, where it arrived after a journey extending from February 20 to April 27. Even this long haul was then found to be more profitable than to bring up freight by flatboat from Mobile. But this era was now passing. In 1821 a steamboat had arrived at Montgomery, from Mobile, in 10 days, and as soon as the steamboat had been adapted to commercial uses the problem of transportation was solved as fully as it could be until the coming of the railroad.

Thus we see immigrants came into the new land by all water or by all land routes, and by routes that were part one and part the other; they came with pack horses and on foot; later with rolling hogsheads, even ox-drawn, and finally by wagon. They came as individuals, as families, and even as communities. They brought with them their institutions, culture, religion, industries, and education. It was a new völkerwanderung of English-speaking men. The instinct that for two centuries had been driving their fathers to America now sent them into a new wilderness in pursuit of the same ideals—fortune, happiness, and liberty.

The United States Census for 1880 indicates the distribution of the population in Alabama from the various contributing States, and this may be assumed to be essentially correct for the earlier decades also. According to these census maps, which undertake to show the localities to which emigrants from the older States removed, the majority of the North Carolina immigrants were settled in the northeastern and black-belt counties of the center. The South Carolinians, spread over nearly the whole of the eastern half of the State, had occupied the black belt, and in considerable force had pressed over to the western boundary. The Virginians went into the black belt, occupied the eastern part of the Tennessee Valley, and made their homes in the southwestern corner, in Washington and Mobile

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[1] During this period there was much discussion in Tennessee on the question of uniting these rivers by a canal. In 1826 Tennessee chartered a company to cut such a canal from the Hiwassee to the Coosa.

Counties, for they represented a large part of the original immigrant settlers. The relation of Georgia to Alabama is like that of a natural overflow, being heaviest in the eastern half, but reaching the western boundaries in considerable numbers, except in the extreme northwest corner and on the middle and headwaters of the Tombigbee, but increasing in numbers again in Washington and Mobile Counties in the extreme southwest and on the banks of the Perdido.

In a preeminent degree does the Tennessee population represent the idea of an overflow. It was heaviest in Jackson, Lauderdale, Limestone, and Madison Counties, all of which lie north of the Tennessee River. The next in importance for their Tennessee population are Colbert, Dekalb, Lawrence, Marshall, and Morgan Counties, which represent the first tier of counties south of the Tennessee River.

It seems fairly accurate to say that the various sections of the State during the early days had a more or less distinct and characteristic population of its own, one which was fairly differentiated from other communities by the source from which that population was derived. The one exception to this general statement is the black belt that lies on both sides of the Alabama River and includes the counties of Montgomery, Lowndes, Autauga, Dallas, Perry, Marengo, Hale, Greene, and Sumter. This was settled early and in common by immigrants mainly from Virginia and the Carolinas, who, being attracted by the fertility of the soil, brought in large bodies of slaves and began raising cotton.

In the early days and until the time of the Civil War Alabama and Mississippi performed for the old Southwest the function which Ohio and Indiana performed for the old Northwest. They served as a stopping place, as a sort of reservoir, in which one or two generations spent their lives before the movement into the newer golden West was resumed. The census records show that migration from Alabama has been uniformly westward, overflowing heaviest into eastern Mississippi, then jumping over the high lands of the center, settling in the Mississippi Delta country; thence crossing the river into upper Louisiana and all of Arkansas, except the northern quarter, and thence into eastern Texas.

# Chapter II.

## PRIVATE SCHOOLS BEFORE THE CIVIL WAR.

As the majority of the first settlers of Alabama came from the older Southern States, they brought with them the educational systems that there obtained. These systems produced private schools and academies—organized, conducted, and supported independently of any State action. The most expected from the State was incorporation. This gave the trustees a legal existence, and endowed them with full powers to conduct their business. The first act of incorporation was issued in 1811; many of these acts gave special favors; this favoritism became so bad in 1856 that Gov. Winston vetoed various college and academy acts and demanded that all schools be placed "on the same favorable footing" by general law and that no special favors be granted. But the system was then in the ascendant, and the special acts of incorporation became law over the governor's veto. This tendency may be shown by the statement that there was no general law exempting school property from taxation till 1832. Before that it was taxed or not taxed according to caprice or pull. In the same way some institutions were expressly allowed to raise money by lottery, while others were not. The charters were, as a rule, drawn in the most general terms. This indefiniteness may have been due to lack of experience in educational legislation, but it was more probably intended to give the widest scope for educational endeavor. The acts, most of them based on the same stereotyped model, recited the names of persons who were to serve as trustees, the name of the new institution, in very general terms the purpose for which it was organized, the powers of the trustees and officers, the character and kind of education that might be given, the power to confer distinctions, diplomas, favors, or degrees, and the amount of capital that might be held, which was generally fixed; exemption from taxation was often specifically granted[1] and was generally coupled during the later years with a provision against the selling of liquors within a certain distance and in earlier years with the provision to raise money by lottery.

No report to a State authority was at any time required; no supervision or inspection under public conduct was to be exercised. The

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[1] Act of January, 1832, exempted from taxation all houses and lots held by incorporated academies as long as used for educational purposes,

State was content to give the schools official life and then let each work out its own salvation. It was a policy in which there was a literal survival of the fittest.

Some of the leading institutions chartered in Alabama before the Civil War, and their distinctive features, are as follows:

## I. PRIVATE SCHOOLS SUPPORTED ENTIRELY FROM PRIVATE SOURCES.

Pickett says (p. 469) that John Pierce established the first American school in Alabama in 1779 at the Boat Yard on Lake Tensas. "There the high-blood descendants of Lachlan McGillivray, the Taits, Weatherfords, and Durants, the aristocratic Lindners, the wealthy Mimses, and the children of many others first learned to read."

With the organization of the Territory of Alabama, the cause of education came to the front. At the meeting of the first Territorial legislature in January, 1818, Gov. Bibb recommended the encouragement of education and the establishment of roads, bridges, and ferries, and the assembly responded to the governor's recommendations.

At the next session the Territory took a unique way of giving what was practically an endowment to two of the academies then at work. The law permitted the banks at St. Stephens and Huntsville to increase their capital stock by selling shares at auction. The profits to the extent of 10 per cent were to go to the stockholders; any profits above 10 per cent were to be applied to the support of Green Academy in Madison County and St. Stephen's Academy. We have no report as to how much was received for education under this law.[1]

With the organization of the State the chartering of educational institutions begins in earnest. It may be assumed that these charters in most cases represent work projected, but not all were in this class, for the acts of incorporation sometimes state that the institution was already in working order. The following list does not give all that were established; only those institutions are here mentioned which seem to illustrate some principle.

### 1811.

The first legislation on education in what is now the State of Alabama was by the Mississippi Territory in 1811, when it chartered an academy in Washington County. It was called Washington Academy, and the exact location was to be fixed. It was made free from taxation, and given authority to raise $5,000 by lottery. In 1814 this act was so amended that the proposed academy might be located in either Washington or Clarke County, which amendment would seem to indicate that the academy had not yet gone beyond the paper stage.

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[1] Pickett's Alabama, Owen's ed., 634.

1812.

Green Academy, in Madison County; the trustees were empowered to locate the academy and to contract for buildings; they were to be free from taxation and might raise $4,000 by lottery. By act of December 13, 1816, Green Academy was given $500 from the Territorial treasury.

1818.

St. Stephens Academy incorporated. By act of December 13, 1816, an academy of this name had been given $500 from the Territorial treasury. This was presumably the academy in Washington County, first chartered in 1811.

1820.

Solemn Grove Academy, Monroe County. Estate of corporation limited to an annual income of $10,000.

1821.

Sparta Academy. Lottery for $2,000 for buildings.

Montgomery Academy. Lottery for $5,000 for buildings.

1822.

Athens Female Academy, Limestone County.

Jefferson Academy, Elyton; might hold $10,000 in real estate and raise $5,000 by lottery.

1823.

Huntsville Library Company. James G. Birney was one of the incorporators.

Claiborne Academy, Monroe County. Amended in 1824 so the trustees could purchase a site and locate the seminary.

1825–26.

Coosawda Academy, Autauga County. Allowed to hold $10,000 worth of property.

Concord Academy, Greene County. Its annual income was not to exceed $10,000.

Moulton Library Company. Incorporated and allowed to hold property up to an annual value of $10,000.

Milton Academy, Montgomery. To raise $3,000 for buildings by lottery and to hold property of not over $3,000 per year.

Four other academies incorporated.

### 1826–27.

Act for school on the Lancastrian plan at Huntsville; lottery for $2,500 to be devoted to buildings.

Greenville Academy, Butler County; was allowed to hold $10,000 in property and to raise $5,000 by lottery.

Tuscaloosa Library Company, a joint stock company, but banking powers especially forbidden; lottery to raise $1,000; limit of property, $5,000.

### 1827–28.

Henry County Academy and Court House, to be built out of a $5,000 lottery.

Phylomathian Society, at Sommerville, incorporated and given power to raise $500 by lottery to purchase a library.

Franklin Female Academy, Russellville, Franklin County. Building already erected; exempted from taxation; apparently first institution thus specifically exempted; male and female departments separate, but under same management.

### 1828–29.

Agricultural Society, Greensborough; property limited to $5,000.

Wilcox Society, Wilcox County, "for encouragement of literature;" might hold $10,000 tax free.

Athens Male Academy, Limestone County. Teachers and students exempted from military service during school sessions.

### 1829–30.

La Grange College. Act provides 50 trustees; limit of property, $300,000; might establish a preparatory or primary school and confer degrees, a purely literary, scientific, and undenominational institution, as the trustees are "prohibited from the adoption of any system of education which shall provide for the inculcation of the peculiar tenets or doctrines of any religious denomination whatever." Apparently the first institution after the university empowered to confer degrees.

### 1830–31.

Tuscaloosa Female Academy was exempt from taxation and was to raise $50,000 by lottery.

Jefferson Academy, Elyton, Jefferson County, was chartered with a property valuation limit of $10,000. It was composed of two schools, a male and a female, each distinct and separate from the other. (See also 1822.)

Seven other academies chartered this year.

### 1832–33.

Summerville Female Seminary, Morgan County. Stock company with private stockholders and a capital of $20,000.

Academy near Statesville, Autauga County. Lottery for $5,000 authorized for building. This academy seems to have been incorporated for the purpose of getting the lottery.

### 1833–34.

Alabama Institute of Literature and Industry; property limit, $200,000. This is like all other acts of incorporation, only bigger.

The Manual Labor Institute of South Alabama, Perry County, was incorporated December 16, 1833, and made big promises which were never mentioned again, even in the text of the law. It might confer degrees "in the arts and sciences," and the trustees might govern the students "by rewarding or censuring them," but there is no further mention of manual labor beyond the title, and in other respects the institution was like others. The title was changed to Madison College in 1839.

### 1834–35.

Alabama Female Institute takes over property of Tuscaloosa Female Academy.

### 1835–36.

Wesleyan Female Academy, Tuscaloosa, was already in existence when official incorporation took place. So with other institutions incorporated this year.

Spring Hill College, Mobile County. This institution was to confer degrees and to have a president, a professor of divinity and of mental and moral philosophy, another of chemistry and natural philosophy, one of mathematics, and one of ancient and of modern languages. It was permitted to confer degrees.

### 1838–39.

Franklin Academy, Suggsville, Clarke County, might hold not over 80 acres of land, free of taxation.

The charter of Mobile College indicates an effort looking toward general supervision by some central authority (as the University of the State of New York). The charter was issued and the right to grant degrees was allowed, but the institution must first—

> sufficiently satisfy the president of the University and the president and board of trustees of the University of Alabama that such a collegiate course is pursued in the college of Mobile, in the arts and sciences, as will justify the conferring of such degrees.

Sixteen academies were chartered this year.

### 1839–40.

The capital or capital stock of the academies was gradually increasing in amount, and exemption from taxation was now the rule rather than the exception.

Clayton Male and Female Academy, Barbour County, might "confer such honors on graduation as to them may seem expedient."

Evergreen Male and Female Academy, Conecuh County, no spirits to be sold within 1 mile. This provision from this time became the rule.

Twenty-three institutions of the grade of academy chartered; 2 in Russell, 2 in Barbour, 2 in Macon, 2 in Benton (now Calhoun).

### 1840–41.

Centenary Institute of the Alabama Conference of the Methodist Episcopal Church, Dallas County. Allowed a capital of $60,000 "over and above its library and apparatus;" authorized in 1844–45 "to confer degrees and grant diplomas."

### 1841 (SPECIAL SESSION.)

Howard College, Madison, Perry County; $200,000; allowed to grant "degrees in the arts and sciences;" evolved from an institution organized out of a manual labor school idea.

### 1843–44.

Nine acts passed relating to the academies of the State; none out of the ordinary nor of special significance.

### 1844–45.

Centenary Institute was authorized to "confer degrees and grant diplomas."

Dayton Literary Association, under the name of the Dayton Female Seminary, was authorized to confer degrees.

The Alabama Medical University, located at Wetumpka and by amendment anywhere in the State, was authorized to confer M. D. after "two full courses of lectures."

Twelve acts passed relating to academies.

### 1845–46.

This year nine acts were passed incorporating academies and giving some of them authority to confer degrees. The administration of the sixteenth section was a matter of increasing significance, as seen from the laws.

### 1847–48.

Nineteen academies chartered; others had their charters amended. Some of the acts of incorporation are now very detailed and exact in their wording and yet add little to the subject. This year a general act against selling or giving away liquor to students of the university or to pupils of any academy or school was passed.

### 1849–50.

From this time the sympathies of the legislature begin to broaden. It is the age of public improvement, of corporations and railroads, and legislators now have less time for consideration of the wants of local institutions.

La Grange College, charter and plans enlarged.

Medical College of the State of Alabama was chartered and located at Montgomery.

### 1851–52.

The day of the college was now dawning in Alabama. The university, either expressed or implied, was also drawing nigh.

The Central Masonic Institute of the State of Alabama emerged from its old chrysalis as the Masonic University of the State of Alabama—the second to have the name of university and one of three to acquire at this session the name if not the substance of a university.

The North Alabama College, located at Huntsville, under the Synod of West Tennessee, was chartered, with $100,000 capital. It was to have a professorship of agriculture, one of civil engineering, and one of the "mechanic or fine arts," as well as departments of law, medicine, and theology—a university in the making.

McGehee College, under the auspices of the Methodist Protestant Church of Alabama, Mississippi, Florida, South Carolina, Georgia, and other States, already had $30,000 subscribed and with a capital of $100,000 was to start as a full-fledged university with power to "confer all the degrees of literary and scientific distinction."

Besides the above, there were chartered 4 other degree-conferring colleges and 18 institutes, seminaries, and academies.

### 1853–54.

The Southern Military Academy, Chambers County, was allowed to raise by lottery, although this custom had fallen into abeyance 20 years before, the sum of $25,000, "to increase the staff of instruction" in the academy; to "enlarge the apparatus; reduce the tuition and to aid generally."

Thirteen academies were incorporated.

### 1855–56.

There was this year evidence of friction between the governor and the legislature, for we find seven acts incorporating institutions vetoed and then passed over the gubernatorial veto. This list of vetoed acts included: The Medical College at Mobile; Florence Synodical Female College; Chunenugge Female College, Macon; Southern University, at Greensborough; Florence Wesleyan University and the East Alabama Male College, at Auburn.

In 1857–58, 19 institutions were chartered; in 1859–60 the number was again 19, but there was apparent a change in legislative perspective and feeling. The State was awakening to the significance of the new industrial era. Many acts related to the chartering of railroad, turnpike, and navigation companies; many others to bank and insurance companies, and the rampant war spirit was everywhere perceptible through the incorporation of military organizations and the permission to schools to add military instruction to their courses. The State, for its part, furnished arms and equipment.

## II. SCHOOLS SUPPORTED IN PART OUT OF PUBLIC FUNDS.

Although the usual custom in Alabama during the ante bellum period was to allow each institution to work out its own educational salvation, exceptions to the rule were numerous and important. The lottery provision in so many of the early charters may be considered a sort of subsidy from the public, and we have seen how, as early as 1816, Green Academy and St. Stephens Academy each received a gift of $500 from the Territorial Legislature of Misisissippi, apparently without any equivalent or any limitation on the way it might be expended. The second Territorial Legislature of Alabama, that which met in the fall of 1818, after allowing the two banks in the Territory to increase their capital stock, required all profits over 10 per cent to go to the two academies mentioned above.

There were also early in the nineteenth century mission schools established among the Choctaws and Chickasaws of Mississippi that had indirectly an influence on the whites in Alabama and received Government assistance. These schools were under the direction of the missionaries of the American Board of Commissioners for Foreign Missions and were established in 1812 and 1819. They were industrial schools in the modern sense. The boys were taught to plow and to hoe; the girls to spin and weave, sew and knit, make butter and cheese, and keep house. So successful were they that in 1824 the American Board of Commissioners for Foreign Missions was reported as having 10 schools with 39 teachers (employees) and 208 pupils among the Choctaws. These schools cost

$26,109, of which the Federal Government paid $2,350 tuition. Among the Chickasaws there were reported two schools with 26 teachers and 75 pupils. They cost $3,283, of which $900 was paid by the United States. It was reported that these Indians, unlike those of the present day in the farther West, were anxious to have more schools and that in 1825 the Choctaws had been appropriating out of their funds held by the Federal Government $12,000 per year for nearly 20 years for education and that the Chickasaws had given at least $30,000 for the same end.[1]

By an act of 1823 Green Academy, after paying $400 for a slave killed while working the public roads, was allowed for five years the fines and forfeitures collected in Madison County.

An act passed in 1824 provided that the county court of Baldwin should erect ferries over Tensas River, Mobile River, and Mobile Bay and let them to the highest bidder. The rents from these ferries were to be a "perpetual fund for the support of an academy and an hospital in the County of Baldwin."

In 1825–26 schoolmasters, teachers, and students were exempted from military duty by act of the assembly.

In 1826–27 a memorial to Congress in behalf of the Lafayette (Female) Academy at La Grange recites that a "handsome building," but of small dimensions, had been erected "for both sexes," that it had been in operation for 12 months with 80 or 90 students. The memorial then asks for a quarter section of land, "which quarter section is extremely sterile and is of no value" except as a site, and for other quarter sections up to 15.

The Valley Creek Academy, Dallas County, incorporated in 1828–29, was to have the sixteenth section lands. They were to be sold and the income devoted to the use of the academy. This act was repealed just a year later.

In 1830 a joint memorial of the legislature to Congress recites that "common schools are not places at which females can receive more than the first rudiments of education," and for that reason asks two sections of land in each county for female academies.

By act of 1832–33 the Blountville Academy was to have "a fair proportion of the net annual proceeds" of the sixteenth section fund. In the same way the trustees of Pendleton Academy at Coffeeville, Clarke County, were to control and administer their sixteenth section.

An act of 1835–36 authorizes the trustees of literary institutions to deposit their funds in the State bank of Alabama for not less than five years, guarantees the principal, and promises 6 per cent. This was the beginning of trouble for such institutions.

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[1] See Publications Miss. Hist. Society, vol. 8, p. 589 et seq.

Clayton Male and Female Academy, in Barbour County, chartered in 1839–40 with a $20,000 exemption from taxation and with authority to "confer such honors on graduates as to them may seem expedient," was to have the sixteenth section lands of its township.

In 1843–44 the military academy at Eufaula, a private institution, was furnished by the State with arms, and this custom became progressively more and more common.

In 1845–46 we find an act which directs the township commissioners to distribute funds pro rata, whether the children attend in that district or elsewhere, and to pay for those who go outside the district to school.

But as time moved on toward the turning point of half a century, it became more and more evident that the center of interest was gradually changing from the old private academy to the new public school. It was fate that the former should decrease, while the latter should increase.

# Chapter III.

## ADMINISTRATION OF THE SIXTEENTH SECTIONS, 1819–1914.

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The citizen of Alabama had had the sixteenth section lands as a basis for public school support presented for his consideration from the earliest times. It was recognized in the ordinance under which the Mississippi Territory was organized; it was in the enabling act of March 2, 1819, which organized the Alabama Territory, and in the State constitution of 1819. "Schools and the means of education shall forever be encouraged," that instrument said, and it further directed that measures be taken to preserve from waste "such lands as are or hereafter may be granted by the United States for the use of schools within each township." It follows that when the Alabamian came to administer the sixteenth section lands for the benefit of his local schools he was on ground already familiar, at least in theory.

The earliest acts dealing with the sixteenth sections sought to make them a source of income for the schools, and it seems proper to review briefly the acts passed during the generation preceding the adoption of the State-wide public school law on February 15, 1854. In this way clearer comprehension can be had of what was attempted, although the laws themselves are disjointed, disconnected, and without logical relations.

Passing over, as immaterial, all the acts dealing with the seminary lands, since these belonged to the university, the legislature of the newly created State, on December 17, 1819, among its very first acts, passed one providing for leasing the school lands "for the purpose of improving the same." In 1820 the limit of leases was extended, and there begins a series of special acts modifying the original law in favor of particular claimants that in time worked havoc with the school lands. On January 1, 1823, a more elaborate act regarding the leasing of lands and the organization of schools was passed. Under the new law the county court was to appoint three school commissioners who were to survey the school lands, plat and lease them at auction for 10 years. Improvements might in part take the place of the annual rental. Another act of the same year allowed the people interested to fix within certain limits the length of their leases.

In 1825 is to be found the first incorporation of a school township, the purpose evidently being to give its trustees greater liberty of action. In this case they were authorized to lease their lands for 99 years to the highest bidder, the upset price being $17 per acre, reduced in 1827 to $12. The proceeds were to be invested in United States Bank or State bank stock, the interest only being used for the support of schools. Other acts of incorporation provided for sale or lease, under varying conditions of price and time.

The fortunes of the Alabama public school lands are inseparably bound up with those of the State bank. Under the original charter of the bank of the State of Alabama (1823) funds arising from the sale of university lands were invested as a part of its capital stock. By act of January 15, 1828, it was provided that the school commissioners should submit to the voters of the township the question of the sale of their school lands. The notes received in payment bore 6 per cent interest and were to be deposited in the State bank. The principal as collected might be invested in bank stock paying 6 per cent interest and guaranteed by the State.

In the thirties there was developed a tendency, encouraged by special acts, to withdraw this principal from the central bank and redeposit it in the branch bank, in order that local borrowers from the townships where these funds originated might be favored. This legislation in favor of local borrowers hampered the bank administration and was doubtless an additional cause of loss to the fund.[1]

An act of November, 1837, provides for either lease or sale. The proceeds, deposited in the State bank or its branches, were to be regarded as the "capital stock of the said township," and were not to be diminished, the interest alone being used for schools.

It would appear that the terms authorized by this act were popular, for much land was sold. But trouble soon began, for at the very next session private acts were passed extending for certain individuals the time of payment. In 1839–40 the bank was given authority to extend all notes for four years, and in 1843–44 by joint resolution they were again extended for a year. In 1842–43 a general act had provided for the cancellation of sixteenth section sales when it was thought that "by reason of the insolvency of the purchasers * * * or from other cause," the sale could not "be made productive." As a result the legislature was swamped in 1843–44 and 1844–45 with private acts providing for cancellation of sales. These requests came principally from Russell, Talladega, Tallapoosa, Wilcox, Washington, Barbour, Dallas, Sumter, Greene, Marengo, Cherokee, Lawrence, and Chambers Counties, a majority being in the black belt which represented the highest degree of industrial development the State had then attained.

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[1] The chapter on the history of banking in Alabama, printed in Knox's History of Banking in the United States, and written it is believed by James H. Fitts, of Tuscaloosa, states that under the act of 1828 something like $1,300,000 of sixteenth section funds were invested in the State bank, but it is believed that this is an overestimate, as will be seen later.

In the meantime the State had entered on a new era of prosperity, everybody was speculating and borrowing, and the State bank was making so much money that on January 9, 1836, direct State taxation was abolished and on the State bank was placed the burden of "defraying all the necessary expenses of the government" of the State up to $100,000. The school fund came in for its share of this prosperity, and the law of January 31, 1839, ordered the bank to pay to the schools $150,000 annually; the law of February 3, 1840, increased this to $200,000. These laws concern mainly the administration and use of the sums earned by the sixteenth section funds, and are therefore considered in detail in chapter 5. But it is proper to add here that while the share of the Surplus Revenue of 1836 coming to Alabama and amounting to $669,086.78 had been made a part of the school fund and deposited in the State bank as a part of its capital stock, the sum of $200,000 demanded under the law of February 3, 1840, as interest by the State for all of its school funds, was much more than a fair rate of interest on both the sixteenth section and Surplus Revenue funds would allow, and the difference between the actual interest and the sum required must be regarded as a privilege tax placed on the bank and its branches for the right to do business. It was entirely in accord with the spirit of the times which looked to the State bank for the expenses of government. From 1836 to 1842 [1] State taxation was abolished, and the necessary funds for the conduct of public business came out of the profits of the State bank and its branches. The bank's success as a financial institution made possible the acts of 1839 and 1840. But this prosperity did not last. It was found necessary by February 13, 1843, to repeal the act of January 9, 1836, and revive taxation for State purposes; and, since the bank could no longer meet its obligations either to the State or to the school fund, the $200,000 contribution required by the law of February 3, 1840, was also repealed (act of Jan. 21, 1843). It would appear that practically the whole income of the public school fund was cut off by this failure of the bank. What that income was during the next five years is uncertain, but it is certain that it was unimportant. We shall see how the State later provided funds by recognizing the now worthless State bank certificates as a valid claim against itself, thus creating a paper fund.

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[1] Du Bose, Alabama History, p. 116; Knox's Banking says 10 years, 1826–1836. "We are satisfied that the profits arising from this fund [the 2 per cent and 3 per cent funds] must have been considerable, for the pregnant reason that the legislature by act of 9th January, 1836, abolished direct taxation for the support of the State Government, and the second section of said act imposes the heavy burthen upon the banks of 'defraying all the necessary expenses of the government of this State.' It is evident that the banks must have been in a sound and prosperous condition, or this unwise legislation of abolishing all taxes would not have been adopted and carried out for eight years before the taxes were reassessed."—Report of Joint Select Committee on the Two and Three Per Cent Funds, p. 7, Montgomery, 1860. See the act of Jan. 9, 1836, in Session Laws, 1835–36, p. 43. County taxes continued.

During the decade of the forties the State took steps to secure the equivalent of sixteenth section lands for those counties which lay within the Chickasaw cession in Alabama. It was mindful also that all sixteenth sections were not of equal value, and as early as 1828 it sent a memorial to Congress on this subject. In 1848 the legislature asked Congress to grant for educational purposes all the unsold lands in the State; another joint resolution of the same session, after declaring that the sixteenth sections had "utterly failed to accomplish the noble object" for which they were intended, asks that the lands granted by act of September 4, 1841, be applied to the valueless sixteenth sections.

The legislature failed to receive for educational purposes all of the unsold lands for which they asked, but their memorials eventuated in various Federal acts under which the State was allowed to locate lands, some of them in other States and in the Territories (i. e., Louisiana, Arkansas, Nebraska), in place of the Chickasaw cession lands that had been sold, and to apply "for the use of schools" in those townships where the sixteenth sections "are comparatively valueless" the 100,000 acres which had been granted by act of September 4, 1841, for internal improvements.[1]

In the meantime the State bank had run its brilliant, but unfortunate course. After meeting the expenses of the State government for some six years out of its profits, it failed, with a debt of $14,000,000 in outstanding bills in circulation, which cost the State in interest $16,840,000 before final liquidation. By act of February 4, 1846, the bank was placed in the hands of Francis S. Lyon and others as commissioners and trustees for final adjustment. This law gave the schools and the university a prior claim by providing that the commissioners "retain in their hands a sufficient amount of the assets * * * to pay off the amounts that may be due the several townships * * * and the interest on the university fund."

But this was not a final settlement. The matter was up again in the session of 1847–48. A senate committee was instructed to consider "what further legislation is necessary" for the safety and security of the fund, "the amount and condition of that portion of the proceeds of the sold sixteenth sections which has not yet been collected, and what reasons are proper for its collection and safe management."

The committee report is dated February 1, 1848. The committee had examined such of the records as were available and found that on December 1, 1847, $953,835.38 had been collected from school lands sold, and that the interest then due on these sums was $73,030.19. They asked the bank further, "What disposition has been made of the money paid into the bank, and what is its condition now?" The branch bank at Decatur had "loaned it out indiscriminately with other funds, and the amount now forms a part of the good, bad, and doubtful debts due the State." This was substantially the case at the Tuscaloosa branch bank. The branch at Montgomery stated that the amount paid in "stands to the credit of the several townships and is a charge against the general assets of the bank." This seems to have been the case also at Mobile. The branch bank at Huntsville reported that the sums paid in stood "to the credit of the different sixteenth sections, called principal or capital, no part of which has been drawn out of bank, and upon which the bank pays interest quarterly."

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[1] See United States Statutes for Sept. 14, 1841; Feb. 26, 1845, and Mar. 3, 1847; and Alabama laws of Jan. 27, 1846; Mar. 4, 1848; Jan. 5 and Feb. 13, 1850, together with memorials and laws for sessions of 1848–49.

Thus it appears that only at Huntsville was the sixteenth section fund likely to recover anything from the bank; here alone did it represent actual cash.

The committee found further that the banks held school land notes to the extent of $453,346.73, of which $208,290.84 was in suit. The committee could not discover how much money had been collected by attorneys, marshals, and other officers and agents of the bank, by sheriffs, coroners, or clerks, and never as yet paid to the banks. They estimated that not less than $15,000 had been collected and retained in the hands of school commissioners.

The policy of the State was now to wind up the banks and dispense with their services as agents. Two parties then appeared in the committee. The minority thought the State should withdraw as much as possible from the administration of the funds by turning over "to the management of suitable persons in each county * * * the uncollected sixteenth section notes and enough of the notes and available assets of the banks and branches to equal the amounts which have been collected.[1]

The majority of the committee took just the opposite view. In the meantime Hon. Benjamin F. Porter introduced into the house of representatives a bill—

> for the preservation of the sixteenth section grants, and to establish, permanently, in the State of Alabama, a common school fund so as to fully secure the intellectual improvement and moral welfare of the youth of the State.[2]

Judge Porter's bill failed to become a law, although vigorously pressed. He made an elaborate speech in its favor, which is quoted here because it opposes the arguments of the decentralizing party, whose views had already almost caused the dissipation of the school funds of the State, and outlines other plans which were later substantially enacted into law. He showed by citations from Alabama court decisions that Congress granted the sixteenth sections—

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[1] See report of the committee on sixteenth sections, Montgomery, 1848, p. 7.

[2] Copy in Curry Collection in Alabama State Department of Archives and History, Montgomery, n. t. p., n. p., n. d., O., pp. 15. Placed by Owen in his Bibliography as of 1847-48.

> to the people of the State, with whom it was then in contract, for the people of the townships, that for them a fund might be raised to exist in incessant continuance for school purposes.

He proved also from the law writers that the legislature could not give up its trust:

> The act by which the State for the present throws off her obligation to apply and secure this fund herself will prove the occasion of an awful responsibility in coming times.

The law authorities all prove, he continued—

> that whether we take the object of the trust or grant, or its letter, the legislature has very extensive authority over the fund in applying it to effecting the purpose.

The opposition said that Judge Porter's bill limited "the perpetuation of schools in each township."

He answered:

> Not so; the bill secures these forever, and equalizes the fund by adjusting the surplus income and throwing it upon the township having no income. To this arrangement the whole people of the State are parties.

The speaker then branches off into an instructive review of the educational situation in Alabama:

> Under the existing system * * * the surplus incomes of these wealthy townships are usually expended in magnificent palaces, which but shame the cause of education. * * * Under this partial system there must be much extravagance, much inequality. Instances could be given. * * * In one, no less than $1,600 is paid for two teachers annually; in another, $3,000.

He then cites particular counties, with their sixteenth section income, the number of children (under 20), schools and pupils enrolled:

*School statistics.*

| Counties. | Sixteenth section income. | Children. | Schools. | Pupils. |
|---|---|---|---|---|
| Benton | $534 | 7,054 | 38 | 1,076 |
| Blount | 214 | 3,410 | 8 | 154 |
| Greene | 7,252 | 4,300 | | 173 |
| Sumter | 8,767 | 8,912 | 16 | 382 |
| Clarke | 25 cts. | 2,765 | | |

He stated further that, out of a white population of 335,185, there were 22,592, or nearly 7 per cent, above 20 years of age who could neither read nor write.

He then reviewed with some detail the proposals of his own bill, some of which will be met again in a more successful one.

He proposed the appointment of commissioners to choose an agent who was to be practically a State superintendent. The education provided for the boys was to be—

> essentially beneficial. It looks to the ordinary duties of manhood, socially and individually; the mechanic arts, agriculture, architecture, engineering * * * I intend no partial, fanciful system; but a gradual, well-developed method of instruction, both for body and soul.

The girls were to be trained on "a more general and efficient plan of education." The bill proposed further the redemption of the sixteenth section fund by means of taxation. Says Judge Porter:

> You have banked on this fund and have liquidated your banks. It is therefore your duty to redeem it. The plan gives the State the use of the principal and binds her to the prompt and perpetual payment of the income, and its application to the gradual establishment of schools in every township in the State. The income will be about $100,000 yearly. Schools are secured in every rich township, and the surplus is applied to the support of schools in the poorer sections. In consideration of this equalization, 10 per cent of every revenue collected is carried to the fund. When it is considered that the fund is now lost; that it must be redeemed by taxation, upon the poor as well as the rich; upon those who have large incomes, as well as those having none from their sixteenth sections; no plan can be more equitable or just.

But Judge Porter's bill failed to pass and the views of the majority of the senate committee were finally embodied in the law of March 6, 1848, for the adjustment of the affairs of the State bank and its branches required the rewriting of the State law dealing with the sixteenth sections. The new law (March 6, 1848) provided that all funds from sixteenth section lands be vested in the State "as trustee for the several townships" (who were the owners) and be paid into the State treasury. The public comptroller was to report on the funds that were due each township. The governor was to issue to the townships a certificate of the amounts due each, with additional certificates when other amounts were received. The county tax collector was required to deposit with the county treasurer an annual sum equal to the interest at 6 per cent on the certificate then held, on which the school commissioners were to draw. Funds derived from land sales were no longer to be invested in "State stock or securities."

A law of 1851–52 secured for the funds also such sums as had been collected by bank officials from purchases of sixteenth section lands, but not turned in. For these sums, as for the other moneys derived from land sales, the comptroller was required to issue certificates of State stock to the proper township.

It would appear from these laws: (1) That the school fund in theory lost nothing by the failure of the State bank, while in reality it lost everything; (2) that each county was forced to raise by general taxation its share of the sums which it might receive back again under the fictitious name of interest if it happened to own sixteenth section lands; (3) that by this legerdemain the State shifted from itself to the taxpayers the burden of providing the annual interest on a paper fund, the principal of which it had invested and lost; and (4) that the same policy was kept up when funds were received from new land sales, the cash receipts being used and interest-bearing certificates taking their place. The superintendents and auditors inveighed against this plan, but without effect. It is the scheme in use to-day.

The seemingly most important school question during these years was to find a way by which the income of these sixteenth section funds, belonging to the separate individual townships, might be so equalized as to serve the State as a whole rather than isolated communities. The law of January 31, 1839, did not attempt this equalization; the law of February 3, 1840, made such attempt and so did later laws. The law of February 10, 1852, even sought to convert the sixteenth section funds from local to general State funds. It provided for a general election to be held in August, 1853, to decide "whether the sixteenth section fund belonging to the several townships in this State shall be consolidated or not." But it was provided also that no subsequent legislature should be authorized by this act "to consolidate or put into a common fund the amount that may belong to any township that shall vote against consolidation."

In this connection the comptroller made a report to the assembly of 1853 in which he gave a detailed statement of the condition of the sixteenth section lands by counties and townships. A senate report (Montgomery, 1853, p. 36) in summarizing the "Report of the Comptroller of Public Accounts showing the sixteenth sections sold in the several counties in the State, and the amount for which each sold," pointed out that there were 1,572 townships, and, assuming that each had a full sixteenth section, there were 1,006,080 acres of school lands. Of these lands there had been sold up to that time by 873 townships 558,720 acres, for $1,575,598. Of this sum, $1,183,302 had been paid—

> to the State bank and branches and to the treasurer of the State at different times, and the larger portion thereof has been funded, and certificates of stock have been delivered to the respective townships for their quota of the cash so paid in.

There was then on hand in notes $392,296 belonging to the townships.

Six hundred and ninety-nine townships had not reported the sale of land "and have neither a cash capital nor notes on hand," leaving 447,460 acres of land which were supposed to be worth about one-third of the lands already sold. The committee was of the opinion, however, that some of these townships "have made sale of their lands and have neglected to make a return of the notes or the money for which the same was sold."

This report to the senate was signed by J. P. Frazier, who makes another report to the senate on the vote in August, 1853, on the question of consolidating the sixteenth section funds. It was found that 852 had voted for consolidation, 264 against it, and 456 did not vote. Of the townships voting, it was found that 199 had $123,541 worth of school lands, or an average of $617.90. From this it was assumed that the 852 owned $526,280 worth. The committee then continues:

> The act, under the provision of which these elections were held, provides that nothing therein contained shall authorize a consolidation of the funds of any township voting against it. It seems to the committee that a consolidation of the funds of the 852 townships voting for consolidation could effect but little good, even if such a measure was in itself right and proper,

for the average interest due to the township would be only about $49. The committee then proceeded to argue that, under the act of Congress, consolidation could not be legally accomplished, and nothing was done.[1]

In January, 1850, the indebtedness of the State to the school fund was placed by a legislative committee at $995,220.97 and the interest given as $59,713.26, or 6 per cent.[2] In 1851 the treasurer reported the "interest on the common school fund" as $103,640.43 (which included the interest on the surplus revenue of $669,086.78 at 8 per cent). In that year it was said "only six States of the Union have at this day a larger school fund than Alabama possesses." The principal of this sixteenth section school fund, as it was in the forties had been lost with the failure of the State bank, but since the certificates representing the sums of school money thus invested in the bank stock were guaranteed by the State, they became a permanent charge on the whole State, the principal being a paper fund only.

There was also the greatest difficulty in collecting solvent outstanding notes. Of those then belonging to the public school fund the comptroller said in 1851:

> The law gives no facilities for the collection of these notes, and the comptroller is unwilling to incur the responsibility of sending them to attorneys in every county in the State for collection. * * * In many cases the proceeds of sales of whole sections are absorbed in expenses, and in some they fall short of paying the expense. * * * It is respectfully suggested that the comptroller be authorized by law to bring suit on all sixteenth section notes. * * * This class of debtors has been greatly favored, and it would really seem that notes that have been running from 10 to 15 years, as many of them have, should now be paid as they fall due.

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[1] See the committee reports, Montgomery, 1853.

[2] In 1848 the income of the sixteenth section fund was estimated at $90,000. This evidently included also the Surplus Revenue fund.

As has been shown already, the assembly had given many extensions on these notes or allowed the parties after they had exploited the lands to throw them up altogether.

In 1854 the management of the school fund was transferred from the State comptroller to the new State superintendent. There were then still more than $100,000 in claims under control of the banks, and $300,000 in notes due the fund was in the hands of the superintendent. Repeated extensions of these notes was said to be still the rule, and many of them for one reason or another, or for no reason, were never collected.[1] And, although there were more or less steady additions to this fund, coming from lands sold and notes paid, the actual cash was covered into the State treasury and went for miscellaneous expenses. If it was then the purpose of the State to create a permanent State educational school fund based on cash or its representatives, the neglect and mismanagement which that fund encountered is noteworthy. Says Supt. Duval, in his report for 1858:

> The "Educational Fund" is apparently composed of sums credited to the various funds above enumerated.[2] In reality these funds have no existence; they are tangible neither to feeling nor to sight; they are legal fictions, having names and "local habitations" only on the books of the different State officers where such accounts are kept. Long since they disappeared from the treasury vaults and went glimmering into the dismal abyss of "State debt." Every dollar of the "Educational Fund," except the payments which are now being made upon the sales of school lands, is raised directly by taxation, and is by no means the result of prudent investment by sagacious financiers.

It appears from the reports of the State bank officials and of the auditor that practically all of the sixteenth-section fund accumulated prior to 1851, together with the whole of the Surplus Revenue of 1836, had been lost;[3] that these sums, speaking generally, represent about one-half of the present total of the fund; that the sums collected since 1851 on account of sixteenth-section lands and valueless sixteenth sections have been used for miscellaneous expenses; and that they have perhaps for the most part brought a fair return to the State.

The policy of using the principal for miscellaneous needs, instead of building up with it a true school fund based on interest-bearing securities, did not go without criticism. The sharpest criticism and clearest reasoning to be found on the subject is in the report of

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[1] As late as 1858 the superintendent was demanding from the banks "all books, documents, or notes, or other evidence of debt relating to the sixteenth section fund," as provided in the act of February 6, 1858. The legislature had also placed on the superintendent the duty of organizing the school for the deaf and dumb. And while duties were increasing, the available help in his office was so limited that the tendency was for him to become a mere head clerk in his own office, and as his letter books show, attending to the petty details of land sales, payment of notes, and the giving of titles, instead of being able to study the question of education in its broader and wider relations to the State as a whole.

[2] The fund created by the law of February 15, 1854, and called the "Educational Fund," included the (1) sixteenth section fund, (2) the valueless sixteenth section fund, and (3) the United States Surplus Revenue fund of 1836.

[3] The Surplus Revenue of 1836 was a State, not a township, fund.

R. M. Reynolds, auditor, for 1869. After quoting the law of March, 1827, which provides for the sale of the school lands, he summarizes the sums received as follows:

| | |
|---|---|
| Received prior to December 1, 1860: | |
| Sixteenth-section fund | $1,499,343.83 |
| Valueless sixteenth-section fund | 97,091.21 |
| University fund | 300,000.00 |
| Total | 1,896,435.04 |
| Received Dec. 1, 1860, to Dec. 1, 1867 | 310,794.12 |
| | 2,207,229.16 |
| Received since Dec. 1, 1867 | 209.75 |
| Aggregate | [1] 2,207,438.91 |

Auditor Reynolds then proceeds:

> The inquiry is very properly made, "What has the State, as trustee, done with this money?" Has it been invested in some productive fund?
>
> No vestige of it can be found in this office of any value whatever, whether in bonds, stocks, bills receivable, buildings, or other property; and the only answer which is found of late record is that "it is held in trust by the State for school purposes." * * *
>
> To the proposition that it is "held in trust by the State," I would say that this can not be the fact, as it is impossible for the State "to hold in trust" what does not exist. This fund is not *in esse* and can not be held in trust by any trustee. It is lost or misapplied, and this compels the further statement above referred to, that "it is assumed" or "held in perpetuity by the State." By what right does the State assume it in perpetuity; certainly not by statute, which provides that it shall be "invested in some productive fund."
>
> If this assumption "in perpetuity" by the State has any significance, it must mean that the money has been lost or misapplied, and the State has been driven to the necessity of either accepting the amount as a debt or repudiating the trust reposed in her. She very properly admits the application of the fund, and says by statute, "I will assume it as a debt and pay interest upon it till the debt is discharged."
>
> Can this fund be, by right or sound policy, assumed in perpetuity? I answer by saying that the State should assume no such right, although she may have, by a technicality of law, the privilege of so doing, for, in my judgment, so long as this state of affairs continues, she does virtually repudiate the trust reposed in her, by compelling the people of the State, who are, by law, the beneficiaries of this fund, to pay as a tax or debt that which they should receive as a bonus or gift for themselves and their children for school purposes forever.
>
> A little reflection will satisfy the most superficial thinker that this fund has been misapplied or lost by the bad management of the trustees. It has been so used that the very object for which it was donated to the people of the State and of the several townships has been entirely frustrated and defeated. What was intended as a bonus has become a burden. What was to have been an annual gift has become a debt—to be paid by direct taxation.
>
> If the theory that this trust fund should be "assumed in perpetuity" be correct, and that the "principal shall never be paid," as is claimed in grave State papers upon the subject, then, indeed, it becomes a source of profound thankfulness that the United States Government devoted so small a sum as $2,107,438.91 [*sic*] for educational purposes, as provision can be made by law for the payment of 8 per cent upon that amount by a direct annual tax of $168,595.11 upon the people of the State. If, instead of this

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[1] Auditor's figures are $2,107,438.91.

amount, the United States Government had given us the munificent sum of $50,000,000 for educational purposes the people of the State, under the theory and practice of "assumption of this fund in perpetuity," would now be taxed for school purposes alone the full sum of $4,000,000 annually. The greater the beneficence of the General Government, the more dire the calamity to the people, and the more terrible their taxation.

We should then present the anomaly, rarely if ever witnessed in history, of a people driven to the verge of bankruptcy by becoming the recipients of most princely donations, given by a beneficent government. It is, to me, a matter of astonishment that such theory should be deemed correct by any one conversant with the laws which govern the management of trust funds, and define their relation to *cestui que* trusts. I fully concur in the following statement of Mr. Joel Riggs, the comptroller of the State treasury in 1851: "Perhaps of all trust funds none has been so greatly mismanaged as the school fund of Alabama."

Until the money due this fund is placed where it will not require a direct levy of tax for annual interest upon the people, who are the beneficiaries thereof, it can not be called in any just sense a "school fund," but it is as clearly a debt as any other portion of her obligations. * * *

Believing that the State is solemnly bound to discharge the trust imposed in her, in relation to this fund, as before stated, I most earnestly recommend that, by action of the general assembly, such laws shall be passed as will, in their execution, restore this fund to the condition indicated by statute.

In his report for 1870 the auditor illustrated the method of procedure in re the sixteenth section lands:

You will pardon me, however, for referring to one transaction in the matter of the sixteenth section fund which occurred during the last year, as it affords all the elements of a demonstration as to the bad policy of absorbing United States trust funds given for the benefit of schools. The lands situated in Nebraska belonging to townships 5 and 6, range 1, 2, and 3, east, in Alabama, were by provision of law sold for the benefit of the children of those townships. The United States provides that the money accruing from the sale of such land should be "invested in some productive fund, the proceeds of which shall be forever applied for the use and support of schools within the several townships, * * * for which they were originally reserved and set apart, and for no other purpose whatsoever." See act approved March 2, 1827. These lands were sold for nearly $20,000 and the proceeds of the sale under the provisions of laws as now in force were placed in the treasury by certificate from this office, when the State became liable for the money, and interest thereon, and unless the policy is changed by repeal of the laws now in force the people of the State will be taxed to the amount of nearly $1,600 annual interest.

By this one act the debt of the State was increased nearly $20,000. Had this amount been invested in United States securities or outstanding State bonds the people would not have been compelled to pay larger tax on account of interest upon the educational fund. The taxpayers of the State, outside of those townships, had no interest in the proceeds of the sale of said lands, and it would have been fortunate for all the taxpayers if the money had never been placed in the State treasury.[1]

Mr. Reynolds recommended retrenchment in educational matters in his reports for 1870, 1871, and 1872, as follows:

(1) Relief from payment of interest on trust funds hereafter collected by requiring them to be funded in United States or other bonds.

(2) Relief from perpetual payment of interest on the trust funds and bonded debt of the State by the creation of a sinking fund.

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[1] Report 1870, pp. 4-5.

The reasoning of the auditor was perhaps sound, but he failed to recognize that the funds lost in the failure of the State bank had been previously taken over by the State and administered as a part of the capital of the State bank under a State guarantee. The State had borrowed these sums from the township and gone into a business which failed. All sense of justice would demand that the State make good the loss, even at the expense of the poorer townships. As to the sums received from year to year, if they were spent in good faith, they did not go into the pockets of individuals; they were not frittered away, but secured for the State a proper return and so became a just debt. For the time, at least, they reduced taxation, and if spent in State undertakings of a permanent character, like roads, buildings, or schools, presumably produced an income, tangible or intangible, which justified their use. And, finally, since the main source of income of a State is taxation on the property of its citizens, a sinking fund could be created only by increasing taxes or by devoting to this purpose other funds the direction of whose earning power must be changed.

The assembly saw the difficulty which Mr. Reynolds did not appreciate, and chose as the less of two evils to continue for 12 years longer the method then in vogue. By act of March 1, 1881,[1] the assembly provided that the State treasurer should invest all money received by him on account of compromising and settling old claims, "together with all other money hereafter paid in on account of the sixteenth section lands in the 6 per cent or other bonds of this State." In this way the beginnings of a real school fund were laid. This fund appears from time to time for the next 10 years in the reports of the auditor and treasurer. In 1883-84 there was $34,100 ready for investment, and in 1885 it was reported that 79 State bonds of $500 each, bearing interest at 6 per cent, had been bought by the school authorities on account of this fund. The arrangement did not give satisfaction, however, and under a law passed February 28, 1889, these bonds were sold, the money received was covered into the treasury, the idea of building up a perpetual fund abandoned, and a return was made to the earlier custom of issuing certificates to the townships to which the funds belonged and counting the money received as a part of the general resources of the State. Alabama has not believed in building up a school fund for posterity. It has reasoned that as a matter of natural development the citizens of 1870 would be less prepared to educate their children than would those of 1910; therefore the greater progress would be made by using all funds as they became available.

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[1] Laws of 1881, p. 25.

So unsatisfactory did the general land situation become by 1899[1] that an act was passed authorizing the governor to employ an—

> agent for the purpose of examining into the sale and disposition heretofore made of school or other lands belonging to the State, with a view of recovering to the State lands which have illegally passed out of the possession and of settling or straightening out titles now in dispute.

By act of April, 1911, section 895 of the Code was amended so as to extend and broaden the powers of this State land agent. Besides the investigations already undertaken, he was authorized to grant rights of way, easements, etc.

The present agent is Hon. W. J. Martin; with the State superintendent and the State board of compromise he is working along the lines of the original act—

> to recover for the State those sixteenth section lands which, according to the records in the land office, still belong to the State as school lands, although occupied and claimed in many instances by others.

Says the State superintendent, in his reports for 1911–12 and 1912–13:

> It is not improbable that many thousands of acres * * * during the past 50 years have been lost to the State through a policy pursued in such matters less vigorously than the interests in hand made necessary. * * * An aroused public interest is now manifest on this subject, more pronounced, perhaps, and offering a brighter prospect for a clearing of the situation than at any time in the past.[2]

With this purpose in view, suit was brought to recover title to some 250,000 acres of school lands on the ground that the lands "still belonged to the State, if the defendant had not got a title by adverse possession." It was also agreed that the defendant had such title if the statutes of Alabama limiting suits like this to 20 years were valid. The Alabama trial court ruled that the statutes were valid. The State supreme court declared that the agreed statement of facts raised the single question whether adverse possession of sixteenth section school lands under the code of 1896, section 2794, and its predecessors, "was operative to invest title in an adverse holder of such lands under color of title" and affirmed the decision of the lower court.[3] The case was then appealed to the supreme court of the United States and came up as the State of Alabama, plaintiff in error, *v.* Schmidt.

It was argued by representatives for the State that a State statute of limitations, whereby lands granted by the United States to a specific use are diverted from the use into private ownership, is in conflict with the act of Congress making the grant, and void.

The lawyers for the defendant in error argued that "adverse possession against any party in which title is so vested that such party may grant an indefeasible estate in fee simple ripens into a fee simple title by the operation of the statute of limitations."

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[1] Law of Feb. 23, 1899.

[2] Superintendent's report, 1911–12, pp. 42–43. Same statements in report for 1912–13, pp. 75–76.

[3] Reported in 180 Alabama Reports, 374.

In its opinion handed down on January 26, 1914,[1] the supreme court of the United States affirmed the decision of the State supreme court:

> The above-mentioned act of Congress, under which Alabama became a State, provided that section 16 in every township "shall be granted to the inhabitants of such township for the use of schools." Of course the State must admit, as it expressly agreed, that these words vested the legal title in it, since it relies upon them for recovering in the present case. Any other interpretation hardly would be reasonable. * * * The argument for the plaintiff in error relies mainly upon Northern Pacific Ry. Co. *v.* Townsend (190 U. S., 267). * * * But it does not apply to a gift to a State for a public purpose of which that State is the sole guardian and minister. * * * It was held that the State of Michigan could sell its school lands without the consent of Congress, Cooper *v.* Roberts (18 How., 173), * * * qualified permission to sell was given to Alabama by a much later act of March 2, 1827. * * * The gift to the State is absolute, although, no doubt, as said in Cooper *v.* Roberts, * * * "there is a sacred obligation imposed on its public faith." But that obligation is honorary * * * and even in honor would not be broken by a sale and substitution of a fund, as in that case; a course, we believe, that has not been uncommon among the States. * * * The result of Cooper *v.* Roberts and of what we have said is that the State had authority to subject this land in its hands to the ordinary incidents of other titles in the State and that the judgment must be affirmed.

The annual receipts from this source are now small—usually not over a few thousand dollars—and come mainly from the School Indemnity Lands.[2] It would seem to make little difference whether the State uses this principal for running expenses and pays the interest on it by a tax collected directly or invests it in bonds and collects running expenses through taxes. It seems to be merely a matter of the point of view. In either case the taxes must be paid, and the school authorities have been consistent in their efforts to make up to the poorer counties out of the general fund what comes to the richer ones out of their sixteenth section funds. The law for the distribution of public funds in effect to-day is essentially the same as that evolved by Gen. Perry in 1854. The present law provides that:

> In making the apportionment of school money to the several districts, the superintendent of education shall first set apart to each township or other school district the amount due from the State thereto as interest on its sixteenth section fund or other trust fund held by the State, and all townships or school districts having an income from such source or from the lease or sale of sixteenth section lands shall not receive anything out of the balance of the educational fund to be apportioned until all other townships or school districts shall have received from the general fund such amount as will give them an equal per capita apportionment with the townships or districts having such income.[3]

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[1] Reported in 232 United States Reports, 168.

[2] These are lands "which have been heretofore or may hereafter be certified to the State for the use and benefit of the several townships or districts in which was a deficiency in the amount of land originally certified to the State for their benefit." See school laws of 1911, sec. 1782. Income from the indemnity lands is first mentioned by the auditor in 1899. For 1912-13 the additions to the fund were $25,571.23.

[3] Law of 1911, sec. 1764, p. 43.

The total result, then, of the retention of the fiction of a paper fund derived from the sixteenth section lands, the payment of interest on this fund out of taxes, and the method of distribution required by the law, by and large, is a straight tax for schools distributed on the basis of school population, with a few townships as yet getting something more than the average per capita appropriation, but none getting less.

As the fund available for education from taxation increases, the per capita apportionment will grow, and this slight difference between the township with the larger sixteenth-section fund and the average township will tend to disappear. When this has been accomplished the whole paper fund theory may be abandoned as so much worthless lumber. Its abandonment before that date would be an ill reward to those townships which by careful administration or otherwise have been able to turn over actual cash for the use of the State.

It will be of interest to note where the best school lands lay and the amount of principal (all paper) owned by each of the counties on November 1, 1851, and October 1, 1912. At the latter date the school indemnity lands are included in the total.

*Principal of the Sixteenth-Section School Fund.*

| Counties. | Nov. 1, 1851. | Oct. 1, 1912. | Counties. | Nov. 1, 1851. | Oct. 1, 1912. |
|---|---|---|---|---|---|
| Autauga | $35,989.07 | $30,038.75 | Henry | $4,419.02 | $17,126.93 |
| Baldwin | | 54,825.00 | Houston | | 10,471.86 |
| Barbour | 15,225.30 | 33,849.23 | Jackson | 5,388.96 | 65,362.83 |
| Benton (now Calhoun) | 21,640.71 | 32,544.76 | Jefferson | 12,299.58 | 48,223.69 |
| Bibb | 11,916.79 | 18,202.90 | Lamar | | 9,086.62 |
| Blount | 2,901.41 | 10,384.95 | Lauderdale | 13,143.26 | 23,859.47 |
| Bullock | | 35,053.39 | Lawrence | 51,236.39 | 63,440.61 |
| Butler | 18,304.09 | 21,738.94 | Lee | | 50,094.10 |
| Chambers | 44,238.07 | 30,905.85 | Limestone | 45,391.31 | 51,274.11 |
| Cherokee | 7,113.29 | 22,062.07 | Lowndes | 41,024.95 | 58,741.05 |
| Chilton | | 17,835.57 | Macon | 34,003.35 | 30,346.85 |
| Choctaw | 2,258.19 | 35,069.75 | Madison | 68,103.02 | 121,942.16 |
| Clarke | 7,632.42 | 36,916.68 | Marengo | 21,006.49 | 80,592.35 |
| Clay | | 13,428.57 | Marion | 2,501.08 | 10,401.68 |
| Cleburne | | 6,991.09 | Marshall | 2,278.71 | 19,561.12 |
| Coffee | 251.48 | 10,140.23 | Mobile | | 3,819.99 |
| Colbert | | 6,114.35 | Monroe | 3,748.37 | 34,468.02 |
| Conecuh | 12,221.63 | 20,889.39 | Montgomery | 59,915.21 | 78,481.29 |
| Coosa | 11,465.10 | 12,390.98 | Morgan | 24,086.07 | 32,979.58 |
| Covington | 115.10 | 19,353.03 | Perry | 46,727.39 | 82,406.83 |
| Crenshaw | | 10,928.87 | Pickens | 41,204.59 | 59,859.31 |
| Cullman | | 3,503.76 | Pike | 7,390.35 | 14,286.91 |
| Dale | 3,481.72 | 5,791.27 | Randolph | 2,750.61 | 4,897.70 |
| Dallas | 81,395.09 | 112,273.19 | Russell | 33,917.83 | 49,553.00 |
| De Kalb | 3,806.57 | 14,986.18 | St. Clair | 1,224.67 | 6,629.89 |
| Elmore | | 28,289.57 | Shelby | 11,351.79 | 25,401.54 |
| Escambia | | 8,737.28 | Sumter | 66,126.90 | 120,921.47 |
| Etowah | | 15,862.98 | Talladega | 11,943.89 | 24,201.17 |
| Fayette | 7,928.31 | 8,951.28 | Tallapoosa | 9,963.46 | 18,108.37 |
| Franklin | 23,734.31 | 20,752.26 | Tuscaloosa | 39,388.17 | 43,263.16 |
| Geneva | | 11,895.45 | Walker | 2,011.34 | 9,476.10 |
| Greene | 67,161.15 | 64,286.21 | Washington | 771.40 | 39,914.62 |
| Hancock (now Winston) | | 4,287.50 | Wilcox | 30,509.18 | 55,692.16 |
| Hale | | 63,027.81 | Total | 1,075,807.64 | 2,191,200.35 |

The principal of the sixteenth section fund on October 1, 1914, amounted to $2,098,557; the school indemnity fund amounted to $158,065; total, $2,256,622.

# Chapter IV.

## THE RISE OF PUBLIC SCHOOLS IN MOBILE, 1826–1865.

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The course of educational development in Alabama is from the local to the general, from the city to the State, and for this reason the history of the Mobile schools is put first, since they furnished an example and a standard for the State.

The germ of the Mobile system is to be found in the act of January 10, 1826, by which there was created a board of "school commissioners" for the county of Mobile, in which the city of Mobile is situated. These commissioners were given full power—

> to establish and regulate schools, and to devise, put in force and execute such plans and devices for the increase of knowledge, educating youth and promoting the cause of learning in said county, as to them may appear expedient.

This was the first school act passed by State authority that saw in education public duty rather than private enterprise. It was the first to attempt the realization of public duty by providing certain definite, fixed, and more or less reliable sources of income. These were:

(1) All lands, grants, and immunities already conferred or that might be conferred by the State or the United States upon the inhabitants of the county, or any organized part of it, for the purposes of education.

(2) The fines, penalties, and forfeitures arising under the act "concerning the revenue of Mobile County," passed December 25, 1824, and including a 2 per cent tax on auction sales of real estate, slaves, live stock, etc., and a license tax on shows, theaters, and similar amusements.

(3) A tax fee of $2 on suits in the circuit and county courts.

(4) Twenty-five per cent of the "ordinary county tax."

The act of incorporation also allowed the school commissioners to select the equivalent of a sixteenth section of the public land, while supplementary acts of 1827 and 1829 provided for a closer collection and more careful accounting for these various funds, and granted permission to raise $25,000 by lottery "in aid of the fund for the support of schools in said county." An act of December 19, 1836, increased the amount to be thus raised to $50,000 and devoted it to the completion of what became known as Barton Academy. This act made minor changes in the matter of revenue and increased the total county tax by providing that the school tax should be derived from a separate levy equal to "one-quarter of the county tax." It required also that public schools be established and maintained throughout Mobile County beyond the limits of the city of Mobile. In the meantime the square on which Barton Academy was later erected was secured (1830) and much of the money for building was raised by Henry Hitchcock. Silas Dinsmore was another supporter. The academy building was named for Willoughby Barton, who drew the original bill passed on January 10, 1826, creating the board of school commissioners for Mobile County.[1]

For a quarter of a century from the time of the first act there were numerous supplementary laws changing the details of administration. An act in 1840 ordered the erection of suitable buildings in each ward as soon as the "school fund on hand may be sufficient"; another, of 1843, revised the personnel of the school board, made them a close corporation with the power of choosing their successors, ordered the payment of the debts of the old board out of the school funds and declared "the plain intent and meaning" of the act to be that the commissioners should "expend their funds in providing competent and suitable teachers."

Under these favorable auspices the public school system of Mobile City and County, independent of the rest of the State, fairly well provided with funds and sufficient unto itself, was launched. It was to be expected from this recital of its opportunities and resources that the system would have sprung full-grown into the educational arena. Unlike most of the institutions of the day, the system was, in reality as well as in name, a child of the city, and it would seem that its commissioners had nothing to do but organize schools that would, in the main at least, look toward modern ideas. The commissioners seemed to have had it in their power to become the protagonists of public school education in the Southern States, but they did not know their day; they failed to take the rising tide that might have led to educational fortune. Instead of leading, for the quarter of a century between 1826 and 1851 the school commissioners did practically nothing toward organizing and opening schools of their own, but distributed the public funds equitably among the different parochial schools.[2] The funds thus distributed were, however, too small to pay any considerable part of the expense of these private schools, and for that reason the school commissioners neither had nor sought to have any control over the teachers or schools, and they did little more than act as agents for the collection of public funds to be applied to the use of private schools.

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[1] Hamilton, Mobile of the Five Flags, p. 254.

[2] This situation may be illustrated by the law of Feb. 4, 1846, which provided that the Methodist in Mobile might say when he paid his school tax whether his tax should go to the school of that denomination, and, if so, to say also under what conditions children of other denominations might be admitted to the Methodist school without charge for tuition.

In 1851–52 the amount thus distributed amounted to $5,550, divided as follows: Methodist parish school, $1,200; Bethel schools, $1,300; Catholic schools, $1,200; Trinity schools, $500; various schools in the county, $1,350. These sums may perhaps be taken as about the average amount distributed from year to year.

This state of affairs became unsatisfactory to all. The Barton Academy building was not used by the school board, but was rented for private schools and other purposes. It was supposed to be worth $40,000, but its income was not over $1,000 per year, and it was proposed in 1851 to sell the building, reinvest the proceeds to better advantage, and so increase the sum available for distribution to parochial schools. An act passed February 9, 1852, after providing that applicants for teachers' positions should furnish a "certificate of competency," gave permission for the sale of the academy building, if the people so desired. At once two parties sprang up; one insisted on the sale and maintenance of affairs as they then were. The other demanded that the Barton Academy building should be used for public schools, as had been the original intention, and that public schools should be maintained in reality and not in theory only.

In the Mobile Daily Advertiser for July, 1852, Gen. Walter Smith argued that the Barton Academy was not then and never could be useful for the conduct of the public schools which were intended to give "to all the children of the community, without distinction, a thorough common-school education (and no more)." For this purpose "several plain, substantial schoolhouses in different parts of the city would better serve than Barton Academy," for high schools, he argued, can not and never should be regarded as a part of the public school system; that this building might be sold for $30,000, which would produce an annual income of $2,400, to go immediately into school work.

Gen. Smith's argument was met through the columns of the Advertiser by K. B. Sewall, who showed a much clearer and more advanced conception of the scope of the public school system. In other States, he said, the system was threefold: (1) Primary schools; (2) grammar schools; (3) high schools; that these three parts made up the public school system. The Barton Academy property had cost at least $100,000 and was now free from debt, and its sale, even with the idea of erecting other buildings, was unwise.

It was also insinuated that the act permitting the sale had been engineered through the legislature after it was known that the people were against it. The proposition to sell had created, so the Advertiser said editorially the day before the election, "a storm of indignation such as has been rarely witnessed in this community."

The Advertiser said further:

> The plan of selling the Barton property having been once entertained, despite all the difficulties in the way, was prosecuted by some of our citizens with a zest and held to with a pertinacity that, had it been wisely directed to perfecting and putting in operation a judicious system of schools, would, we must think, have resulted much more beneficially to the cause of education in our city and county.

The election was held August 2, 1852, and the "no sale" tickets won by a vote of 2,225 to 244. A new board of commissioners was chosen on the "no sale" ticket, with whom were joined four members of the old board. They set to work to alter and repair Barton Academy and adapt it to the needs of the new system. A committee was appointed to consider and report on the best plan for organizing the schools, and their report was accepted on September 16, 1852. The resources of the board for the previous year were about $6,000, including rent for Barton Academy. This sum was now reduced by $1,000, and out of the remainder some old appropriations had to be met. But notwithstanding these discouragements, the school was opened November 1, 1852. On the opening day there were 400 pupils; on February 1, 1853, the attendance stood: High school, 109; grammar school, 209; primary, 536; total, 854. For a time tuition fees were collected "in all the schools"—the amount not specified. The system was again passed on by the county electors in 1853, and approved by a vote of 1,597 to 869.

In the summer of 1853, Mr. Willis G. Clark, chairman of the commissioners, visited the schools of other cities, studied their systems, and made a report. In 1854 the system was carefully examined, modified, and improved in the light of experience. The commissioners had served without pay, the work had increased, and it was now desired to extend tbe system beyond the city limits. A city superintendent was therefore appointed, and the city and county were divided into school districts. The receipts and expenditures for the years 1852-53 and 1853-54 were as follows:

| | |
|---|---|
| Receipts: | |
| Licenses, auction duties, and taxes | $17,658.21 |
| Tuition | 10,889.81 |
| Donations, Samaritan Society | 300.00 |
| Total | 28,848.02 |
| Disbursements: | |
| For country schools | 2,158.61 |
| Balance appropriation old board for parochial schools | 1,050.00 |
| City branch schools | 642.51 |
| Teachers | 21,802.51 |
| Repairs, painting, salaries of officers, and incidentals | 6,775.05 |
| Total | 32,428.68 |

It appears, therefore, that the average expenditures per year were $14,424.01 and the disbursements $16,209.34. The deficit for the two years was met on the personal credit of members of the board.

The detailed report showed that the income from tuition was greater than that from taxes and that the former was therefore necessary for the stability and development of the schools. The rates charged, moreover, were lower than those charged at private schools and—

> as permits to attend the schools without charge were freely given to all pupils whose parents were unable to pay tuition for them, the means of acquiring a good education was brought, for the first time in Mobile, or Alabama, within reach of all classes in the community.

It would appear from this extract from the history of the Mobile public schools, written by a member of the original board, that an efficient school system, without any tuition charges, was at that time an impossibility; that the schools then organized were far superior to any that had hitherto existed in Alabama; that free tuition was granted as a favor to the poor; that other patrons were required to pay for tuition, and that therefore the schools were not public schools in our sense. But it is evident that the persons interested in this system were making an honest and conscientious attempt to supply the children of Mobile County with a school system which had public support as its ultimate goal, and it is also stated that they attained so high a character that they were patronized even by the rich in preference to the best private schools in the city.

The third session showed an enrollment of 1,012 pupils. Laws passed in 1854 enlarged the powers of the commissioners, increased their resources, and forbade that any part of their funds should be used for the support of sectarian schools. In 1855 the enemies of the system gathered their forces for a final struggle, were again defeated, and in October of that year an institute for the instruction of teachers was organized. The act of February 15, 1856, greatly promoted the development of the system, by providing that certain licenses should go to the schools and by granting an annual tax "not exceeding one-twentieth of 1 per cent" upon the real and personal property of the county. This act was passed by an almost unanimous vote.

The compliment had been paid the Mobile schools of exempting them from the conditions of the general State law of 1854. This local autonomy gave them an independence of action and power of taxation not enjoyed elsewhere in the State, and so has opened to them the path of progressive educational development as yet denied by constitutional limitations to other sections of the State.

The expenses for the school year ending July 31, 1856, were $21,899.23. The tuition fees collected were $14,712.80, and the total income was some $4,000 less than the expenditures. A school census taken in the fall of that year showed 3,620 school children within the city limits and 2,300 beyond, making 5,920 in the county.

Under the action of the law of February 15, 1856, the income of the schools increased. The income and expenditures for the next three years may be tabulated as follows:

*Income and expenditures of the Mobile schools.*

| Year ending— | Income. | Expenditures. |
|---|---|---|
| July 31, 1857 | $37,068.25 | $38,185.30 |
| July 31, 1858 | 44,035.03 | 45,232.18 |
| July 31, 1859 | 46,681.51 | 46,937.35 |

These figures indicate a steady, healthy growth, with an ever-decreasing margin of the excess of expenditures over income.

The reports on attendance are not so favorable. In October, 1858, there was reported 4,314 city and 2,195 country children. The enrollment in the city schools on March 31, 1859, was 1,533, or 35.5 per cent; the average daily attendance was 1,240, or 28.8 per cent.

In 1859 the school commissioners took a step backward by deciding to abolish the office of school superintendent. This caused the opposition again to rally against the schools, but they failed, and the schools were strengthened by the trials through which they passed.

Until the war was in actual progress, the schools were very prosperous; as income increased, tuition charges were reduced and the free list extended, so that, had no interruption occurred in this course of development, Mobile would have evolved from schools partly supported by tuition fees and partly free to a system that would have been supported entirely by taxation and wholly free, and thus the stigma of pauper schools would have disappeared automatically.

The schools were kept in operation during the days of the war, although with diminished attendance. They were closed in 1865, on the occupation of the city by the Federal forces under Gen. Granger. They were reorganized and reopened in the fall of that year, and a broader field of usefulness was developing for them when reconstruction came. During the throes of reconstruction, the school commissioners suffered imprisonment rather than obey an illegal order, and in 1869 had their special privilege of a separate system abolished, being absorbed into the State organization. In 1875 the status of the earlier period was restored and has since been maintained, under the protecting ægis of the constitution itself.

# Chapter V.

## THE EXPERIMENTAL PERIOD IN THE ORGANIZATION OF A STATE SYSTEM, 1819–1854.

Turning from the city to the State, from local to general educational efforts, it is seen that the period prior to 1854 was distinctly empirical. There was in it little besides a few legal provisions that probably never lived beyond the statute books; and the few efforts made for schools were mainly tentative, for the people were learning school keeping in the school of experience.

The first law to consider the actual organization of schools was the act of December 17, 1819, which provided that the county agents be empowered to contract with "a teacher or teachers and for a school house or houses when and wheresoever they may think proper." The agents were made school trustees and given powers of superintendence and "the proceeds of each section" were to be applied "to the purposes of education alone." There is no record that this law produced any particular effect.

The law of January 1, 1823, was more detailed and specific. It provided that the people were to elect three district school trustees who were to employ teachers "at an annual salary or at a stated price for each scholar," build schoolhouses, "purchase books and stationery for the use of the school," and "*designate the pupils who shall be admitted to the school without tuition fees.*" The teachers were to be "duly examined" by the school commissioners. The local officers were to report to the county clerks and these to the general assembly, and were to include in their report the number of pupils "educated gratis."

This act furnishes a key to the educational mind of the day as it appeared in Alabama: School lands were leased or sold; schools were free in the old sense, not in our present sense; all might attend, but all were not equal; the poor were received at the expense of the district; others paid for their tuition, and so the school was neither public nor private, but a cross between the two, and the State's bounty went only to the poor.

The law of 1837 provided that district school trustees be elected. They were to manage the schools and report their proceedings to the county clerk, including the condition of the lands and funds, progress of schools, teachers, etc. The county clerks in their turn were to report to the governor.

Up to this time presumably no money had been actually expended for schools. Certainly there was no workable law, and no statistics of such expenditures are to be had. The first law looking to this phase of the subject is the act of January 31, 1839. This act undertook to make the public-school system participate in the general prosperity of the State and to shape the lines of financial administration. The law directed that the State bank and its branches should provide annually out of their "net profits" the sum of $150,000 "for the purpose of establishing and aiding in the establishment of schools." It directed further that on demand from the township trustees the bank should pay to the township as much, up to a limit of $200 and including whatever sum might have been earned by its own sixteenth-section funds, as the people had subscribed in the previous year. All of this money was to be used in paying for the tuition afforded in the previous year. If there were two or more schools in the same district, the money was to be divided between them "in proportion to the number of regular students at each school," but no citizen was to be entitled "to an amount exceeding the amount by him actually subscribed;" if there were indigent persons who wished to send their children to the school, but were too poor to subscribe, they were reported by the commissioners and listed as subscribing $10 each. The total so subscribed was not to exceed $100. A part of the State fund equaling these poor subscriptions was to be used exclusively "for the education of the indigent scholars of the township."

By act of February 3, 1840, the amount to be furnished by the State bank was increased from $150,000 to $200,000, and the rate of payment was fixed at $12 per pupil. The total contributed to each township was not to exceed $400, and this was to include all interest earned by the sixteenth-section lands. An amount equal to one-third of that asked from the State bank was to be collected by private subscriptions and to the commissioners was given the power "to say what scholars shall be educated free from charge."

The laws of 1839 and 1840 evidently assumed that the schools were to be organized on local initiative, that certain sums were to be subscribed and collected and the schools actually taught in advance of any State aid; that the upper classes were to take the lead in these matters and pay tuition for their children. This is also evident from the amount appropriated, for at $12 per head $200,000 could educate only about 17,000 pupils, and since in 1840 there were 335,185 white persons in the State, the total school population was not far from 90,000. State activities looked only to the education of the poor.

This situation was greatly modified by the subsequent fortunes of the State bank. As has been shown in chapter 3, by 1842 the bank could no longer meet its obligations, and the requirements of February 3, 1840, were repealed by the act of January 21, 1843.

In the meantime, what about the actual administration of the schools? Among other troubles it was apparently very difficult at this time to differentiate between public and private (which were generally denominational) schools. The question was discussed time and again whether parents might send their children to schools outside the district and still draw their pro rata of school funds. This was decided affirmatively. The repeal and subsequent reaffirmation of the law indicates the interest felt in the matter and would seem to show that private and denominational schools in this way came to receive a part of the public bounty—a view sustained and supported by the act of 1848 which provides that the proper proportion of the public funds might be paid to "any other schools." [1] It would seem, therefore, that at this time the major part of the public State funds, as in Mobile, probably went to private and denominational schools and that little supervision was or could be exercised.

The census of 1840 reports school statistics for Alabama as follows: Two colleges, with 152 pupils; 114 academies, with 5,018 pupils; and 639 primary schools, with 16,243, making a total of 21,413 pupils, of whom 3,213 were "at public charge."

Four years later comes a statement on the same subject from State sources which are perhaps more accurate. The "Tabular Statement of Census of Alabama taken in the year 1844" (Tuscaloosa, 1844), page 5, reports:

| | |
|---|---|
| Number of colleges and high schools | 7 |
| Students in colleges and high schools | 626 |
| Academies | 131 |
| Pupils in academies | 5,266 |
| Common schools | 858 |
| Pupils in common schools | 21,982 |
| Total at all schools | 27,874 |

Source material for the educational status of this period is all too small. Educational effort was being made, but the leaders were themselves inexperienced. They were learning by experience; this process was both costly and slow, and little record seems to have been made of their efforts. Of the flush times represented by the full years of 1839 to 1843, when the schools were receiving some $200,000 out of the income of the banks, only the meager records already quoted seem to exist. The State documents for the period prior to 1854 which have been available give us little light on the subject, and for definite statistics we must depend on the Federal censuses of 1840 and 1850, incomplete as they are. But it is evident that even then the spirit of education was moving on the face of the waters of ignorance. Public leaders, vaguely conscious of their needs, were groping, blindly, it may be, but nevertheless with hope for better things. This is evident from the message of Gov. Reuben Chapman to the legislature, November 13, 1849, in which he discusses the common schools in general, and agricultural education in particular:

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[1] See also the law of Feb. 3, 1846, which orders the commissioners of a certain school district (Demopolis) "to distribute the annual interest * * * among the several scholars residing therein, whether the said scholars attend the school or schools established by the legal officers of said township, or any other school."

> The agricultural interest in this State is believed to exceed in value, and in the number of persons connected with it, all the other industrial pursuits; and while the other interests, so much less important, have been more or less fostered, agriculture has been suffered to languish, until much of our fertile soil has become impoverished and unproductive, from an unskillful and injudicious system of cultivation, and many of our citizens have removed, and others are moving, from this State, in search of new lands to subject to the same ruinous system.
>
> That the lands so worn out can be restored to their original fertility, and the system of cultivation be so improved as to maintain that fertility and increase their capacity for production, the experience of other States leaves no room to doubt. If agriculture is the groundwork of all industrial prosperity, and the strength of a State depends upon the number, as well as the character, of its population, we are all interested in adopting such an improved system in the cultivation of our lands as may increase immeasurably the wealth of our State, and take away from the most useful class of our population all motive for emigration. Nine-tenths of our young men are destined to become tillers of the soil, yet we are without a school in the State where scientific agriculture is taught, when by the establishment of an agricultural school we might raise up among us a class of scientific farmers. Civil engineering and architecture are professions by means of which scientific information is made practical for the benefit of those who have knowledge of the science upon which either is based, and by the practice of which their professors make a respectable living. So scientific agriculture might be made a profession with us, the professors of which, by visiting farms, analyzing their soil, examining their local position, superficial character, etc., might be able to place within the reach of the least enlightened of our agricultural population all the benefits of experimental science, and, in so doing, at the same time, advance their own pecuniary interest.
>
> The best mode that occurs to me for the accomplishment of an object so highly important would be that the legislature should request the board of trustees of the university to establish in that institution a professorship of agriculture, and that connected with it there should be a farm for experiments. The duty of such professor might be to superintend the cultivation of the farm, with the view to determine the best mode of raising the staple and other agricultural products of the State, of protecting them from the attacks of destructive insects, testing the comparative value of the different varieties of seed, and the various modes of resuscitating the worn out lands; to deliver public lectures at stated times, and to publish an agricultural paper, in which might be reported lectures delivered, and the character and result of all experiments made. The benefits that would arise from the establishment of such a department in our university are such, it appears to me, as would authorize the State to make the appropriations necessary to defray the expenses.
>
> The subject of common schools deserves all the consideration and encouragement it is in the power of the general assembly to bestow. The whole theory of our form of Government is based upon the capacity of the people. Without a general diffusion of intelligence among them, the machinery of a Government thus constituted can not be

expected to move on successfully. The highest and most important of all the duties of a free Government is to advance the cause of education, and guard against that decline of liberty which results from neglecting the minds of the people.

Unfortunately for our State, her financial condition will not allow her to do more than to make a faithful application of the fund granted by Congress for that important object. By an act of the last session, State stock for so much of this fund as had been received from the sixteenth sections sold was required to be issued to the townships respectively entitled to it. This has been done, and the interest stipulated upon it has been paid in the mode provided.

It is to be regretted that this fund, which consists in the sixteenth section in each township, has been clogged with such conditions in the grant that the noble end designed can not be accomplished—that is, to provide for the education of that portion of our population who have not other means. The sixteenth sections that are at all valuable are generally in those townships where the white inhabitants are less numerous, and are generally in circumstances not requiring such aid, while the poor sections are generally found in townships where the limited circumstances of the citizens deny their children the opportunities of education from their own means.

If the whole sixteenth section fund could, without a violation of good faith, be brought within the power of the general assembly, I would recommend its exclusive application to the education of those who are without other means.[1]

Gov. Chapman was succeeded in office by Henry W. Collier. In his message to the legislature, December 20, 1849, he discussed the common-school system somewhat in detail and outlined a plan of action:

Our plan of common-school education, if indeed we have one, is eminently defective, if for no other reason, because it wants a head to direct its operations, to prescribe the course of instruction, to receive at least once a year reports of the condition of the township schools—the number of scholars, male and female; the amount paid to teachers from the income of the sixteenth-section fund; the contribution of patrons, etc. Such a modification of our system with other corresponding changes, would infuse into the cause of education generally new life, and in particular elevate primary schools. The standard of education in these is generally far below the wants of the pupils, and it is a patriotic duty resting upon us with great force to endeavor to raise it higher. * * *

No one should be employed as a teacher whose moral character is not unexceptionable, who does not combine amiability with a due degree of sternness, and shall not be found competent upon a satisfactory examination to teach orthography, reading, penmanship, arithmetic, English grammar, modern geography, and the history of the United States. It would be very desirable if his knowledge extended further, so as to give some general instruction to the male scholars upon agriculture and the mechanic arts, and thus fit them for the practical duties of life. * * *

There should also be a director of common schools for each county, and three trustees for each township. The latter should provide for the erection and repair of schoolhouses when necessary; should endeavor to collect a township library by voluntary contributions, until it shall be deemed expedient to appropriate a fund for the purchase of books; should examine, or cause to be examined, applicants to teach, stipulate their compensation, make settlements with them, etc.

It is not desirable to multiply offices too much, and I therefore suggest that the judges of the county courts in their respective counties should be county directors; they should receive reports from the trustees of the townships. * * *

A superintendent should be a man of energy, benevolence, education, amiable disposition, and strong common sense, wholly untrammeled by other duties. His powers

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[1] Message of Gov. Chapman, Montgomery, 1849, pp. 23-25.

> should all be enlisted in the business; he should be required to devote a certain portion of his time in endeavoring to awaken an interest in popular education.
>
> That the fund may be productive of the most good to those who really need it, I recommend that it be explicitly provided that only those who are pupils of the teachers employed by the township trustees should receive any portion of it. In some of the townships the income of the fund has been distributed among all the schools within them according to the number of the scholars, often making the benefit too inconsiderable to aid the dependent.[1]

But Gov. Collier was ahead of the representatives of the people. The committee of the legislature to whom this message was referred answered in glowing platitudes and expatiated on the necessity of common schools and then regretted that the "heavy public expenditure" could not permit any State contribution "to the enterprise." As a substitute for a general State system, the committee thought that "a few splendid educational prizes" in the shape of free courses at the university would be quite adequate "to educate a sufficient number of our young men for the useful and honorable profession of teachers to supply the wants of the State." There was the same situation in the assembly of 1851–52. A committee of the house on education, Charles P. Robinson, chairman, made a report in which the whole educational situation was reviewed. The burden of this report was the sixteenth-section funds. This is what was understood by public education, and for that reason the State had failed to respond—

> to the demands of the people. Instead of encouraging education by the application of the means which the people have ever been ready to yield [i. e., taxation], legislatures have seemed to consider all education as connected in some way with the sixteenth-section fund.

The committee then presented a tabular statement in which they show that 89 townships received $32,736.21 from their sixteenth-section funds; 629 others received $31,912.25, and the remaining 794 townships seem to have received nothing. This unequal state of affairs led the committee to say:

> A grant founded in the noble policy of providing a secure and permanent source of education to all who would avail themselves of it has issued in the raising by *general taxation*, annually, the sum of $64,548.46 [sic]. This sum is applied, in great part, to those counties least in need of this assistance, and what is still more important, in the wealthier portions of such counties. Nor does the evil stop here. It is to be feared, from this inefficient system of the present school laws, that the money is not always applied to the support of free schools in the townships, open and accessible to all the children thereof.

The committee thought that out of the "130,000 children" in the State between 5 and 15 "only between 35,000 and 40,000" were at school during the year. They did not offer a bill for a system of public schools, but brought in one to authorize the governor to appoint a State superintendent at $3,000 per year. It was to be his duty to visit the counties, make public addresses, and arouse interest in education. He was to make a census of school children between 5 and 16 and ascertain the number of schools and academies. He was to be a missionary, a voice crying in the wilderness, a guide, philosopher, and friend, and prior to October 1, 1853, was to report to the governor the draft of a bill for a public school system.

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[1] Message of Gov. Collier, Dec. 20, 1849, Montgomery, 1849, pp. 33, 34, 35.

The logic of the committee was irrefutable; the superintendent was badly needed; but the bill did not become a law, for the time had not come when the citizens of Alabama could look squarely in the face the problem of taxation for public schools.

It will be noted that through all the discussion there was the idea that the public funds should be devoted exclusively to the education of the poor. The dominant note does not seem to be that of contemptuous concession to those who could not help themselves—the pauper school idea—nor yet the modern idea that the State educates for its own protection and in order to give to each the opportunity for fullest development, but a position between the two. There was a certain consciousness present with the slaveholding element that for the laboring classes the education received in the public schools was the best, and should for that reason be devoted to them in its entirety, not as a dole, nor yet as a right, but as a charity from the more fortunate to those who were less so.

When we consider the amount of income available from these funds; when we remember the deep-rooted hostility to taxation that characterized these people, and their extreme jealousy of anything that looked like centralization of power; when we recall that practically all men in Alabama who thought were able to educate their own children out of their private means, we can better understand the feeling which would devote the public funds to "the education of those who are without other means." The slaveholder was willing to surrender his proportion of these public funds, not in the sense that he patronized and looked down with contempt on his poorer neighbor, but because, by refusing to share in this fund, by bearing his own educational burdens, he could help the general cause, help the State bear this burden, which the individual most benefited by it was unable to do, and at the same time limit the activity of the State.

All parties were now beginning to look toward the same goal. In his message to the assembly in November, 1851, Gov. Collier had again emphasized his position on education:

> Primary school instruction can not be dignified as a system until it has a head to direct and supervise its operations. A superintendent * * * should be appointed by legislative authority. He should traverse the State, address the people, visit and examine schools, and inquire into the qualifications of teachers, as often as a proper attention to his other duties would permit.

Gov. Collier again failed to get what he had recommended, but with 1851–52 the period of legislative empiricism ends. With 1853–54 came new leaders, a new law, and a new awakening. Hitherto the first had been absent, the laws had been ineffective, and the time for the awakening had not yet arrived.

In the meantime what was the actual status of public education in the State and what were the legal requirements in the case?

Under the code of 1852 the duties of the school trustees required them to take the census of children 8 to 21 years of age; to divide the townships into school districts;

> to establish in each school district, for at least three months in each year, a school for instruction in the common English branches—reading, writing, arithmetic, spelling, grammar, and geography; and to locate schools, provide schoolhouses, employ teachers, etc.

The total white population of the State in 1850 was 426,514, and we may assume that this represented a school population of over 100,000. The census of 1850 shows:

(1) Five colleges, with 55 teachers and 567 students. These institutions report $5,900 income from endowment, $395 from public funds, and $35,050 from other sources, making $41,255 in all.

(2) The academies and other schools were 166 in number, with 380 teachers and 8,290 pupils. They reported an income of $164,165, of which $4,949 came from public funds.

(3) There were reported 1,152 public schools, with 1,195 teachers, showing that they were nearly all one-teacher schools, with 28,380 pupils. They had a total income of $315,602, of which $800 came from taxation, $56,367 from public funds, and $2,916 from endowment.

From these figures, apparently compiled from the reports made by the schools themselves, it is seen that there were then 37,237 pupils of all grades in the schools of the State, but when the statistics were gathered by families, it was found that 62,778 pupils had been "attending school during the year." It will probably be safe to assume that the census by schools represented a daily average attendance and the one by families the total enrollment. It will be noted also that the census does not report the length of school term, nor consider the efficiency of teachers. It is probably not far from the truth to assume that while the census figures may be essentially correct there were no real public schools; that the schools which passed under that name were private institutions supplemented by public funds, and that their work when weighed in the balance of specific accomplishment, was not of great importance.

This judgment is based on testimony no less authoritative than that of the State superintendent himself.

Gen. William F. Perry became the first superintendent of public instruction, in 1854. In 1897–98 he published his reminiscences of the condition of the public schools at the time he took charge.[1]

He says, in part:

> Nothing entitled to the name of a system of education had ever existed. There was a fund amounting at that time to about $1,000,000, belonging * * * not to the State, but to the individual townships. This fund, so far from being an aid, was really an obstacle in the way of the establishment of a general system of schools. Its uselessness for such a purpose was due to the great inequality of its distribution. There were many hundreds of townships whose school lands were totally valueless; and probably more than half the remainder possessed funds so small as to be practically valueless. There were whole counties whose township funds consolidated would hardly have supported a single decent school. It should be remembered, too, that these sections of the State contained a white population at once the densest and the most needy.
>
> The townships having the largest school endowment were found chiefly in the Tennessee Valley and in the central portion of the State, known as the Black Belt. While it is true that the funds of most of them were legitimately and wisely used, it is also true that they belonged to those who were in least need of aid, and it is equally true that many of the most richly endowed townships were covered with cotton plantations and negro quarters and had no schools at all.
>
> But what had the great mass of the people done for themselves? Left without guidance, encouragement, or any material help from without, what means had they employed, and what facilities had they created for the education of their children?
>
> * * *
>
> The answers * * * are as various as are the conditions which prevailed in different localities. In the towns and villages were generally found school buildings more or less commodious, but rudely and uncomfortably furnished, and defaced by abuse and neglect. The teachers looked to the patronage alone for support * * *
>
> It is painful to recall * * * the wretched provision made for the education of the young in those large areas of the State where the land is unproductive and the people were poor. Hundreds of townships were entirely without a school; and there were whole blocks of counties that could boast of scarcely a single pleasantly located, comfortable schoolhouse. Many that I saw in my travels through the State beggared description. But for the rude benches visible through the cracks, and the broken slates and tattered spelling books scattered around them, any one would have been at a loss to determine for what purpose connected with civilized life they were designed.
>
> It may reasonably be supposed that the character of the instruction received by the children in such places was on a par with their material surroundings. Where there were no township funds, there were no trustees. Any one could get the use of the wretched, makeshift of a house who could secure from parents a sufficient number of pupils, pledged under written articles of agreement * * * It goes without saying that only teachers of a very low grade of qualifications could be obtained. A majority of them, at that time, were men, and in most cases, men who had resorted to teaching because they had proved unfit for anything else.

But Gen. Perry was able to mention at least one pleasing exception to the above picture of general gloom. It is that of a Lancastrian school in perfect working order.

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[1] Transactions Alabama Historical Society, vol. 2.

He says:

> In rare cases enterprising teachers succeeded in arousing a strong local interest and in building up what might be termed country academies, in which the classics and sciences were taught, and aspiring young men received their preparation for college.
>
> To illustrate the power of personal magnetism and the extent to which even the humblest people can be stirred by the desire for improvement, I can not forbear mentioning a school that I visited, when a youth, among the hills of DeKalb County. A stranger came to the neighborhood and began teaching in a rude schoolhouse. Interest was awakened, and the house was soon filled. Interest grew into enthusiasm, and to accommodate the increasing members, rough sheds, covered with boards, were constructed around the house, and to them were added bush arbors, until the place resembled an old-fashioned religious camp-ground. There were in attendance, I suppose, not less than 150 pupils of all ages, from 6 to 30. The principal occupied the house; each shed was presided over by an assistant; while the arbors were filled with classes in spelling, reading, geography, and simple numbers, which were presided over by their own members, each in his turn assuming the duty of leadership, and going over the entire lesson before surrendering the place to a successor. The utmost ceremony was observed in every change, and each leader, on taking his place, was saluted with profound obeisance by the class. The whole machinery seemed to move with the utmost precision, and no evidence was anywhere visible of idleness, misbehavior, or disorder.

# Chapter VI.

## THE ORGANIZATION OF THE STATE PUBLIC SCHOOL SYSTEM, 1854–1856.

With the beginning of the sixth decade of the century the public conscience of Alabama—and by this is meant the conscience of a few high-minded leaders among the slave-holding class—was being quickened into a broader conception of duty to the humbler citizenship in a common democracy. These leaders could well afford to educate their own children at private institutions; the poorer citizens could not, and all help for them must come through the State. Therefore, with an unselfishness for which these aristocratic slaveholders have received scant credit, they set to work to organize a system which would educate the children of all freemen. Their misfortune was that, having no experience to guide, they sought information only through empiricism, and they made mistakes which dearly cost them and the people whom they sought to serve. They were hampered by lack of means and scarcity of population, and it is not just to hold up these men, or their system of slavery, as the cause of the failure of schools. In North Carolina the common-school idea had been worked out with a high degree of success before the Civil War. Other States were facing the same problem, each in its own way, and had not the war intervened there is every reason to believe they would have attained, before many years more, a satisfactory solution.

In 1853 the State had a public school fund of more than a million dollars; it had reorganized its sixteenth section fund, had gotten it free from its entangling alliance with the old State bank, and had tried out various plans of its own and found them failures. The ground was fallow, and there was the contagious example of successful schools in Mobile. To the State senate of 1853–54 there came from Lauderdale Robert M. Patton, later governor; and to the house Alexander Beaufort Meek, from Mobile, and Jabez Lamar Monroe Curry, from Talladega. These were the men who made possible the school law of 1853–54. The drafting of the school bill was referred to Judge Meek, chairman of the house committee on education. With his draft went a report in which is reviewed the general educational situation in Alabama.

After discussing the value of education in the abstract and paying the usual meed of praise to progressive New England, Judge Meek boldly puts forward the establishment of a system of common schools in Alabama not on the ground of favor or charity, but because it represented "not only the highest interest, but the clear right and imperative duty" of the State; there was even in his mind a glimmer of the modern doctrine of self protection: "The property of a State is dependent for protection and safety upon such a system, and should therefore pay for its establishment and maintenance." The doctrine of "protection and safety" is certainly nearer to modern ideas than it is to the older doctrine of charity and paupers.

The difficulty before the committee was how to equalize the very unequal distribution of the sixteenth section fund. Says Judge Meek for the committee:

> The inequalities in the distribution of the sixteenth section bounty may be forcibly illustrated by a few facts. The total number of townships in this State is 1,572. Of these, 873 have sold their sixteenth sections, leaving 699 which have not made a sale, from their sections being below the minimum value. Those that were sold embraced 558,720 acres, and brought $1,575,598. The residue of the sections, if sold, it is estimated, would swell this amount to about $2,000,000—the munificent donation of the General Government for schools in this State.
>
> From reports heretofore made it appears that the value of the sixteenth sections in the 13 counties of Autauga, Chambers, Dallas, Greene, Limestone, Lowndes, Madison, Montgomery, Perry, Pickens, Sumter, and Tuscaloosa is at least one-third more than half the value of all the other sixteenth sections in the State, while the white population of those counties is but little more than one-fourth of that of the whole State. Dallas County, with a white population of about 7,000, has an annual fund of near $5,000, while Mobile, with near 18,000 white inhabitants, has no fund. Coosa, with a white population of near 11,000, does not get annually $600, and Pike, with near 13,000, gets less than $450. The whole county of Covington receives but $6.90, while one township in Perry gets $1,200 annually, and another but 67 cents.

These funds, which Judge Meek happily characterized as "misapplied bounties," belonged, as we have seen, to the individual townships and could not, under the law, be pooled in a common State fund.

He says.

> The limitations of this beneficent grant have defeated the very object for which it was intended—the advancement of education—and have been the chief cause of the obstacles which have existed to the establishment of a public school system in this State, for there have been sufficient indications in the past that the people would not favor any system of public schools which did not embrace the sixteenth section fund within purview of its arrangements, and give to the munificent appropriations some equitable and efficient application.
>
> Your committee * * * have accordingly prepared, with great care and labor, a system of free public schools, in which this is made the fundamental and pervading provision. They have proceeded on the principle that every child in our State, of suitable age, is entitled to a sufficient sum to give him the elementary branches of knowledge, free of cost, and that when any child does not receive such sum from the sixteenth section fund, it should be afforded to him by the State, * * * the object being to establish in every township, where the number of children demands it, at least one free public school, for primary instruction. * * * To meet this want

will require reasonably liberal appropriations. * * * Surely $2 a scholar is the lowest minimum which could be regarded as adequate for that purpose. * * * There can be no doubt that the people of this State would more gladly accede to such a disposition of the funds in the treasury than to any other. They exhibit in the clamorous demands which have been sent up every year for the establishment of common schools and in the utterance of all the organs of thought and sentiment in our State. It is not from any one class that this appeal comes—from no favored few—but from the great body of the people * * * whose voice should be heard and obeyed. * * * There can be no doubt that it is the unquestionable right, the highest interest, and the most imperative duty of the State to educate her children.

The bill introduced by Judge Meek, which became a law on February 15, 1854, created in the first place an "Educational fund," consisting of—

(1) The annual interest at 8 per cent of that part of the surplus revenue deposited by the United States with Alabama under the congressional act of June 23, 1836.

(2) The annual interest at 8 per cent on the proceeds of sales of certain lands granted by the United States for the use of schools in the valueless sixteenth sections, under act of August 11, 1848.[1]

(3) The annual interest at 6 per cent on the funds which have or may accrue from sales of sixteenth section lands.

(4) $100,000 from the State treasury.

(5) All money arising from escheats.

(6) An annual tax of $100 for each $100,000 of capital stock of every bank, insurance or exchange company, or in that proportion.

(7) An annual tax of $100 levied on every railroad after it had declared dividends.

(8) An annual tax of $100 on every agency of any foreign bank, insurance or exchange company.

In his first report the State superintendent wrote of these various sources of revenue as follows (pp. 3–4):

> The two funds placed under his control, under the general title of "Educational Fund, "were created at different times, were subject to different laws, and sustained different relations. One was the property of the State, consolidated and unchanging in amount;[2] the other belonged to the townships in their individual capacity, distributed among them in all possible amounts, ranging from a few cents per annum to many hundreds of dollars, and was constantly accumulating. A small portion of the latter was still under the mangement of the banks, another and much the larger was in the treasury; a third, in the form of sixteenth-section notes, was found in the office of the comptroller of public accounts, and scattered over the State in the hands of trustees, withheld under special laws, or in defiance of law.
>
> To unite these funds thus situated, and bring them under one general system of accounts which would do full justice to all, and more than justice to none, cost an amount of thought and labor which he had not been prepared to expect, and which few, perhaps, now can realize.

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[1] This referred to the transfer of certain lands granted for internal improvements by act of Sept. 4, 1841, to "the use of schools in such townships of said States as in which the sixteenth or school sections are comparatively valueless."—S. at L., ix, 281.

[2] The Surplus Revenue Fund of 1836.

The administrative officers provided were:

(1) A State superintendent of education.

(2) Three commissioners of free public schools in each county.

(3) Three trustees in each township.

The superintendent was to be elected by the assembly for two years and was paid $2,000 per annum, and his duties—those usually pertaining to this position—were defined. The commissioners included the county judge of probate and were elected by the people. They had a general supervision of schools in the county and were to control all school moneys. They might provide houses, apparatus, books, libraries, or other conveniences, and served without pay. The trustees were elected by the people, could establish schools, and employ teachers who were in every case to be first "examined and licensed."

The State superintendent was made the authority in control and management of Federal funds, and all funds were to pass through the State treasury. School age was fixed at 5 to 18, and the superintendent was instructed to seek to equalize, by means of the Educational Fund, "the irregularities of distribution produced by the sixteenth-section fund," which was also made a part of the Educational Fund.

The commissioners had authority to consolidate weak townships and the trustees were required to have the pupils divided—graded as we say—

> into at least four classes, the first of which shall be known and designated as the primary class. This class shall embrace instructions in reading, writing, and simple arithmetic, and such instruction shall always be given to all pupils requiring it, free of any cost or charge * * * . The other classes * * * shall be made successively free of any cost for instruction, according to such gradations, whenever the fund coming to the township or united townships for school purposes, from any source, will justify it.

In cases where public funds were not sufficient to make all classes free, "moderate tuition fees" were to be charged in order to give the teacher "a fair compensation for his services."

Each county was "authorized" to raise annually by special tax upon real and personal property an amount not exceeding 10 cents on the $100 valuation, "for the support of common schools therein and for providing suitable houses and purchasing libraries and apparatus for such schools." These moneys were to be paid into the county treasury, were apportioned therefrom, and at least 50 per cent of this local fund had to go for the payment of teachers. All money from "the State school fund" had to be used for teachers only and all teachers were to be "duly examined, approved, and employed by competent and lawful authority."

This school act—a remarkable one, when we consider the time and the State in which it was enacted—provided as follows:

(1) An educational fund was established by recognizing existing sources of income and creating new ones. It authorized, but did not command, a local tax and the public schools thus established were to be supported from the income of the State school funds and from local taxation. There was no direct State taxation for schools, although the State contribution of $100,000 of necessity came from taxes. In this way, local self help was encouraged by the recognition and financial aid of the State, which also sought to equalize from its own funds the inequalities between rich and poor communities.

(2) The primary work was made absolutely free from tuition charges.

(3) The grading of classes and the examination and certification of teachers were provided for.

The weakness of the law was the lack of efficient supervision. The superintendent did not have sufficient power to compel reports. The county commissioners were in part public officials already, and neither they nor the township trustees were required to show any particular fitness for their work, nor were they paid for their services. It was a public school system without proper local supervision, and without the necessary centralization. Yet it did not escape criticism, protests against it being recorded in both houses. That of the senate, signed by six members, was long and bitter. It characterizes the law as "unjust and totally inadequate." The objectors charged that the law set aside $83,333 "to be applied beyond the limits of the townships to which it belongs." This fund was characterized as a "sacred trust" while the house objectors styled it a "vested right." The "extraordinary power" given to the superintendent was assailed, the "generous confidence" granted was "liable to abuse" and gave "too large a range of discretion." The entire sum—

> is left in the discretion of one man, with the only qualification that his rule of distribution shall equalize sixteenth sections, of which it leaves him the sole and exclusive judge * * * The bill, repudiating as it partially does, the sixteenth section funds as due and belonging to the inhabitants of the townships, does not give these townships the poor privilege of having the law to prescribe the rule of decision, but by the will of one man and in the way the temptations of self interest and the allurements of ambition may prompt him.

Both protests were probably justified in objecting to appropriations on any other basis than that of actual attendance. The senate protestants also objected—

> because $2,000 are appropriated to pay the superintendent and $3,000 more to the circulation of essays, periodicals, and to enlighten the people and not to educate the children as the bill proposes—thereby wasting enough money to educate annually 1,000 of the indigent children of the State.

Of the unheard-of and radical proposals of the bill the house objectors said: "Such provisions are not adapted to our latitude, and need only to be named to be seen to be objectionable." Nor did the senate objectors fail to make their appeal to religious bigotry.

> The powers conferred on the superintendent are extraordinary. He can govern every free school in the State absolutely, prescribe the course of study, the books, say which are sectarian or what not, and exclude or admit them at will. The cunning freethinker or sectarian would want no better opportunity than this to impress his own opinions upon the entire State through the rising generation.

This Alabama State law of 1854, product of the brain of Alexander Beaufort Meek, lawyer and judge, editor and legislator, poet and soldier, shows a grasp of educational problems, a comprehension of school difficulties and school needs and a modernity of methods and aims that are truly astonishing.

The assembly chose as its first State superintendent, William F. Perry, an experienced and enlightened teacher who had long been connected with private schools in the State and who later became a brigadier general in the Confederate army. He was urged for this place by Gen. J. Tipton Bradford, Hon. J. L. M. Curry, and Chief Justice W. P. Chilton, the opposing candidate being Rev. Dr. Andrew A. Lipscomb, a teacher and scholar then living in Montgomery and later chancellor of the University of Georgia.

General Perry has told his experiences in organizing the schools in his Reminiscences, already quoted. He says:

> After setting my office in order, I opened correspondence with the judges of probate, asking them to order elections of trustees in the townships and to instruct them, when elected, to ascertain and report the number of youths of school age in their respective townships. * * * I was ignorant enough to expect that the work could be accomplished in the course of two or three months at furthest.
>
> Quite a number of the judges of probate paid no attention to my requests. Many found it difficult to reach the townships. Circulars could not be addressed to townships which had no organization and no legal representatives. Notices in the county papers often failed, while in many counties no paper was published. And then, there was the inertia of ignorance, the difficulty of getting masses of uninformed people out of the ruts in which they had been moving for generations.
>
> To the people of more than one-third of the State, the township as a corporation, or as a body politic of any kind, was unknown. The very boundaries had faded from their minds and memories with the disappearance of the marks made on the forest trees by the surveyors who had located them. To reach these large masses of people, induce concerted action, was a task the difficulty of which no one had anticipated and which was accomplished at last by dint of hammering. * * * No difficulty occurred in the counties whose townships had maintained their school organization.
>
> It was late in the fall before the complete returns were received and the apportionment was begun. In the absence of any specific direction of law, the distribution was made by giving to the townships that had nothing and adding to those that had little until the appropriation was exhausted, leaving those whose school revenue exceeded the average thus produced simply to retain what they had.
>
> I felt that it would have a dwarfing effect upon the system and upon the minds of the people to fall into the habit of employing teachers for only such time as the public

> money would last, and was anxious at the beginning to give such direction to the State appropriation that it would stimulate rather than suppress the spirit of self help in the people. The trustees were therefore advised to authorize teachers whom they approved to raise their own schools by subscription, the patrons being responsible to the teacher for the tuition, at specified rates, of the pupils subscribed, and the trustees engaging to use the money under their control, as far as it would go, in discharging the liability of the patron.
>
> This * * * had several advantages: First, it would avoid all danger of complaint that the trustees had imposed upon the people a teacher who was not acceptable; second, it put all of the patrons upon a method of procedure with which they were already familiar; third, it showed them that the State had not proposed to relieve them of all expense and responsibility in the education of their children, but to guide and assist them in the performance of a duty which they could never abdicate.
>
> The first of January, 1855, was fixed as the beginning of the school year; and the rude machinery began to move. * * *
>
> The year 1855 was spent in visiting the counties of the State and in conducting an extremely heavy correspondence. Questions of all shapes and sizes, growing out of every thinkable complication of conditions, came in a continuous stream. At first, some of them were very embarrassing. After a time, however, I became so saturated with the system, in its entirety and in its details, that my mind reached conclusions with ease and confidence. * * *
>
> In my tour through the State, I found the schools generally in operation and the people pleased and hopeful, especially in those counties which were most benefited by the system; and returned to my office feeling fully assured that the public educational system of Alabama, though still crude and imperfect, had come to stay.

The test of actual use showed the weakness of the law of 1854. Gen. Perry continues:

> The county administration was imposed upon the judges of probate, who were required to perform their duties without compensation. The township officers consisted of a board of three trustees. They were charged with duties which called for more than ordinary administrative power. They were to raise means for the erection of schoolhouses when such were needed; to divide the townships into such districts as the situation demanded; to select and employ teachers and supervise the schools; to make settlements and submit annual reports. * * *
>
> The weakest feature of the system was the county administration. The judges of probate, not without good reason, regarded the imposition of new and onerous duties upon them without compensation, as a great hardship; and while many of them were faithful and efficient, they could not give the amount of attention that was absolutely essential to the prompt and efficient inauguration of a united system.
>
> The adoption of the township as a school corporation, although under the circumstances a necessity, involved great inconveniences. It complicated the duties of the trustees, who were generally plain, unlettered men, and led to neighborhood jealousies and dissensions in reference to the location of schools.

The first annual report of Gen. Perry, that for 1854–5, tells more accurately perhaps, but certainly less vividly, substantially the same story and is quoted here because it represents contemporaneous documentary evidence.

This report shows that the people had not yet learned the importance of making returns. Only 8 counties—Chambers, Benton, Randolph, Shelby, Pickens, Barbour, Limestone, and Lauderdale—made fairly complete reports. These reported 312 schools and

9,658 pupils. It was said that "several hundred" schools had been established since June 30, 1855, and it was "positively known that a large number in existence before that time were not reported." The total number of pupils 5–18 years of age was given as 145,588, and the sum available for distribution to each was $1.33⅓.

Says the superintendent:

> Each township having no sixteenth section fund accordingly received an amount produced by multiplying that ratio into the number of children reported by it. Those having from their sixteenth section fund less than that average received such sum, as, added to the interest of their fund, would be equal to such average, and those already having more, simply retained what they had. The number of townships belonging to the latter class is not precisely known, since some that have sixteenth section funds failed to report.

There was constant trouble over the payment of salaries and in forwarding the necessary funds for this purpose from the superintendent's office. Three months after funds were due and payable 15 counties had not drawn them because the commissioners were unwilling to incur "the responsibility and personal risk of ordering remittances by mail, and they have no other means of obtaining it."

There was also a contention among various schools, each of which demanded its pro rata of the public funds "instead of employing a single teacher at a fixed salary." In these cases the school trustees—

> established such a number of schools as the people needed, binding themselves to make an equitable distribution of the money under their control among them, according to the attendance upon each and the length of time each was taught, leaving the patrons responsible to the teachers for the remainder of the tuition, at rates previously agreed upon.

As a result of his visits to the schools the superintendent was constrained to say:

> The melancholy reflection still, however, obtrudes itself that three-fourths of the youth of the State have hitherto either gone without instruction entirely, or have been crowded into miserable apologies for schoolhouses, without comfortable seats, without desks or blackboards, often without the necessary textbooks, and still oftener without competent teachers.

but he believed that the law was not in advance of public sentiment—

> that the people of the State, by an overwhelming majority, are favorable to the principle of public education, and are prepared to sustain the legislature in all judicious measures for giving additional efficiency to the system.

He urged various changes in the law and declared that the—

> ultimate establishment of State normal schools for the professional training of teachers can not but be regarded by the enlightened friends of popular education as a consummation most devoutly to be wished.

The scope of the course of study laid down for the public schools at this time by the superintendent included:

> Orthography, reading, penmanship, mental and written arithmetic, geography, history of the United States and outlines of universal history, English grammar and

exercises in English composition, natural philosophy and astronomy, bookkeeping, physiology and hygiene, and the Constitution of the United States.

It will not be understood as the object, in recommending a course of study, to lay down a number of branches to be pursued in an inflexible order, and in a specified time. That systematic arrangement aimed at in most colleges, by which a regular gradation of classes and a fixed order of studies pursued in a given length of time are maintained, can not be expected and it is believed need not be desired in the common school.

Such branches have been selected as are considered essential parts of a good common-school education—such as every American youth should pursue in order to be fitted for the active duties and the high responsibilities of life.

In some townships the amount of the public fund may justify the employment of teachers competent to give instruction in a more thorough and extensive course than that recommended; while in others the schools will be made up almost entirely of pupils in the primary class.

Elaborate treatises on natural science can not ordinarily be used; and hence, such have not been prescribed. The works on this subject in the catalogue of textbooks are simple and popular in their style, and have been selected with reference to their adaptedness to the great majority of those into whose hands they will be placed. * * *

No apology is deemed necessary for recommending physiology and hygiene as a branch of common school education. It is rather a matter of astonishment that it has hitherto received so little attention.[1]

The pupils are classified according to studies, as follows:

Class I.—Orthography, reading, writing, mental arithmetic, written arithmetic, through the fundamental rules.

Class II.—The above continued, defining, first lessons in geography, and history.

Exercises in definition, in some form, should be kept up throughout the whole course. The pupil should never be without his dictionary at his side, and the faithfulness with which it has been consulted should be tested by the teacher at each recitation.

This remark is particularly applicable to the study of history which, properly pursued, not only strengthens the memory and stores it with facts and principles, but also makes daily additions of new terms to his stock of words and imparts facility and precision in their use.

Class III.—Any of the above, with English grammar, composition, history, and simple exercises in bookkeeping.

Class IV.—Such of the above as may not have been completed, the natural sciences, bookkeeping, physiology, and the constitution.

Spelling, reading, and declamation throughout the course.

A fifth class has been introduced into the form of trustees' reports. It was designed to include any of the higher English branches that may be pursued in the public schools by pupils under 18 years of age.

In the above classification an endeavor has been made to conform as near as possible to that natural order in which the human faculties are developed in childhood.[2]

The textbooks used included:

Denman's Primer; Webster's Spelling Book and Sequel; Webster's Dictionary; Gallaudet's Illustrative Definer; McGuffey's series of Readers, revised and stereotyped edition (particular attention is invited to the exercises in articulation); Tower's Gradual Lessons in Oral and Written Arithmetic (this work may precede Colburn's Mental Arithmetic and Davies's Arithmetic); Monteith's Youth's Manual of Geography; Smith's Quarto Geography; Tower's Elements of Grammar; Tower's English Grammar; Hurd's Grammatical Corrector; Thomas' First Book of Etymology; Guernsey's Primary History, or Parley's First Book of History; Willard's Abridged History of the United States; Parley's Universal History, or Willard's, which is far preferable when the pupil is more advanced and has the time to devote to it; Quackenbos' First Lessons in English Composition; Frost's Easy Exercises in Composition is also an excellent work for beginners; Comstock's Primary Lessons in Natural Philosophy; Comstock's Philosophy, the revised editions of 1853–54, greatly improved (a small book of questions and illustrations accompanies it); Smith's Illustrated Astronomy (Olmsted's School Astronomy is preferable for more advanced pupils); Mayhew's Practical System of Bookkeeping, with Key; Cutter's First Book of Anatomy, Physiology and Hygiene; Hart's Exposition of the Constitution of the United States; Comstock's System of Elocution; Vodge's Mensuration, after arithmetic has been thoroughly mastered, will be found an excellent work for those who have not time or opportunity to study the theoretical demonstration of mathematical principles.

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[1] Forms for the use of officers of free public schools, etc., Montgomery, 1854, pp. 14-15. [2] Ibid., pp. 16-17.

The work on English grammar in the catalogue has been selected after some hesitation. The novelty of the manner in which the subject is presented may render it objectionable to many. It will be found, however, to contain no radical innovation, its chief peculiarity consisting in its arrangement and in the prominence given to analysis and construction. It is recommended to the examination of teachers. Those who, after such examination, may still prefer to conform to established usage will find Wells' Elementary and School Grammars excellent works.[1]

The books recommended for teachers were:

> The School and the School-Master, by Dr. Potter and G. B. Emerson; Theory and Practice of Teaching, by D. P. Page; The Teacher, by J. Abbott; Slate and Blackboard Exercises, by W. A. Alcott; Popular Education, by Ira Mayhew; American Education, by Mansfield. Barnard's School Architecture is an excellent work for those who may be engaged in the erection or furnishing of schoolhouses.[2]

In his message to the legislature in November, 1855, Gov. Winston refers to the school law of 1854 and says:

> The results of the school bill of the last session have not been so favorable as was hoped for by its friends. In some parts of the State it has worked well; in others it has not been well received and has not been productive of good. It was not to have been expected, however, that a system perfectly harmonious could have been adopted at once.

As a result of various criticisms, the law of February 15, 1854, was revised, and on February 14, 1856, another act, one "to render more efficient the system of free public schools in the State of Alabama" was passed. The new law was based on the experience gained during these two years. It increased the interest on the sixteenth section funds from 6 per cent to 8 per cent, changed the lump sum given by the State so that the total amount of money available for each child should be $1.50, and broadened slightly the sources from which the school income was derived. The State superintendent was required to make an annual report to the governor, and in place of the county commissioners there was to be elected a county superintendent of education, whose compensation was to be fixed by the county court.

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[1] Forms for the use of officers of free qublic schools, etc., Montgomery, 1854, pp. 19–20. [2] Ibid., p. 21.

He was to have general superintendence of the county free schools and visit them at least once a year; he was "to note the course and method of instruction and branches taught" and give "instruction in the art of teaching and the management of schools;" to see that no "sectarian religious views be taught;" make "proper distribution" of all school funds, "paying over promptly, whenever called upon;" make an annual report to the State superintendent on the number of children, the condition of the sixteenth section lands, if not sold, and on the schools of all sorts in his county; suggest improvements; examine "all persons who propose to teach;" "organize and hold annually" county conventions of teachers and provide beforehand for the delivery of lectures "upon topics connected with schools and education;" he was to seek out "indigent and meritorious" young men entitled to be beneficiaries of the University of Alabama and encourage them "to become students thereof;" handle all county money for education and report on the same.

The duties of the local trustees, the control of the school funds by the State superintendent, the power of local taxation, and the distribution of funds thus raised remained substantially the same as in the law of 1854. The payment of school moneys was simplified, for under the new law the State superintendent was to notify the local authorities of the amount due the particular county and the tax collector for the county was to pay the sum over to the county superintendent. The school age was made 6 to 21, instead of 5 to 18, the length of the school term was fixed at six months in the law of 1854, and in both laws the independence of Mobile County of the State system, except to the extent of drawing its pro rata and reporting, was reaffirmed.

# Chapter VII.

## THE WORK OF THE PUBLIC SCHOOLS, 1856–1865.

Gen. Perry, first chosen State superintendent by the assembly in 1854, was reelected February 14, 1856, and resigned September 1, 1858, after serving more than four and one-half years. He was succeeded by Hon. Gabriel B. Duval, who resigned in 1864.

From Supt. Perry's reports we learn that the "Educational fund," created by the law of 1854, produced for the calendar year 1855 an income of $237,515.39, derived as follows:

| | |
|---|---|
| Interest on sixteenth-section fund | $74,687.60 |
| Interest on valueless sixteenth-section fund | 7,767.30 |
| Interest on Surplus Revenue fund | 53,526.94 |
| State appropriation | 100,000.00 |
| Special taxes on corporations, etc | 1,300.00 |
| Escheats | 233.55 |
| Total | 237,515.39 |

The number of children of school age, 5 to 18, was reported as 145,588. In 1856, the school population, owing perhaps to a more careful enumeration, as well as to an extension from 6 to 21, was reported as 171,093, with an enrollment of 89,160 pupils, including Mobile. This number represented about 52.1 per cent of the total school population. There were 2,281 schools and the average attendance was 38,265, or 22.4 per cent. The school term averaged six months, being extended to nine months in Mobile, to eight and three-fourths months in Russell, to eight in Chambers, Lowndes, Macon, and Montgomery.[1]

The impression that the schools were already doing good work is clearly shown by a comparison printed in the Alabama Educational Journal of the school enrollment in 23 given counties in 1850 and 1856. According to the census, these counties in 1850 had in school 27,023 pupils; in 1856 this number had risen to 51,635.

The funds distributed by the State in 1856 were derived as follows:

| | |
|---|---|
| Interest on sixteenth sections and accumulated interest | $90,023.49 |
| Interest on valueless sixteenth sections | 7,767.30 |
| Interest on Surplus Revenue, 1836 | 53,526.94 |
| State appropriation | 100,000.00 |
| Licenses, special taxes, etc | 16,371.68 |
| Total | 267,689.41 |

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[1] Alabama Educational Journal, Oct., 1857.

This sum furnished a per capita of $1.37½ and paid 57 per cent of the entire tuition in the public schools, the total expenditures as estimated by the trustees being $474,370.52.[1]

The State superintendent, in his report, called attention to the failure to appropriate $1.50 per child as required by law, because of the lack of funds, urged that a "fixed ratio of distribution be established," and asserted that the present amount was "certainly not sufficient to sustain a well-developed and efficient system." Because of the State debt, however, his demands for the schools were modest. In a letter to Rev. J. H. Baker, dated July 3, 1857, he said:

> I do not think it would be safe at present to attempt the increase of the school fund beyond such an amount as will produce $1.50 or $1.60 per child. That much can be appropriated and still leave enough to meet the State bonds as they fall due. * * * I would also dread to see an attempt made *now* to establish normal schools at much expense to the State. Public opinion does not seem ripe for the movement, and a failure would not only prevent effort hereafter in that direction, but will react injuriously upon our system. My hope has been that the county associations of teachers gradually protracted into institutes may be made to supply the place of normal schools at present and by degrees prepare the public mind for an advance movement by demonstrating the utility of special preparation on the part of teachers.[2]

Gen. Perry notes that many county superintendents appointed under the act of 1856 found their counties in a state of educational chaos and that most of the year was spent in the work of organization, an "unprecedented impulse" being thus given to education. He believed that the cardinal points toward which special effort should then be directed were:

1. The construction and furnishing of schoolhouses.
2. The qualification of teachers.
3. The enlightenment of public opinion.

Of the character and value of schoolhouses as they then were, we are left in no doubt by a writer in the first number of the Alabama Educational Journal, January, 1857. The article was published by Gen. Perry and may therefore be assumed to be with his tacit authority and sanction. This writer says:

> The increase of wealth and energy has given us comfortable and some elegant private residences. Large and beautiful churches have been erected. Public spirit has also extended to the erection of commodious jails and courthouses. * * * A large number of the schoolhouses of our State have come under our observation and of this number, we truthfully say that at least nineteen-twentieths are in an unfinished condition—without chimneys or stoves, either unceiled or unplastered, badly ventilated or entirely without windows, miserably furnished with benches and desks, with no place for water buckets or dinner buckets, and in every respect the most uninviting houses in the entire vicinity. The outside appearances are, if anything, worse—the house unpainted, the grounds unimproved, no shade trees or shrubbery, no pleasant playyards.

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[1] See Perry's report for 1856, in Alabama Educational Journal, May and June, 1857.

[2] Official letter book, 1858-1860, MS.

Another writer said that many of the schoolhouses were old, decaying log cabins, and were devoted to schools because fit for no other use. He estimated that only about one-eighth of the school population could then be furnished with decent school buildings. Gen. Perry himself said in 1857 that notwithstanding great improvement since 1854—

> one-third of the structures in which the pupils of our public schools are congregated are destitute alike of every attractive feature and every element of comfort.

Another anonymous writer contributed a series of articles on the "School law of Alabama" to Gen. Perry's Alabama Educational Journal,[1] which had all of the merits of frankness, and which showed that there was at least one person in the State who knew how to think for himself and to express himself in vigorous English for the general enlightenment of the people on this new educational system. He complains of the indifference of the public to educational work. Writing of the superintendent's report, he says, with a piquancy and flavor that is strongly modern:

> We do not believe that five editors in the State have read it, and we doubt if 10 lawyers, doctors, or ministers have *seen* a copy of it. The apathy that hangs over our educational interests is perfectly surprising. While every paper in the State would contain, as an item of general interest, the conversion of a Hottentot or Kangaroo to Christianity, or would follow with doggish pertinacity the footsteps of a filibuster to his final doom, not one in ten, judging from their silence concerning it, recognizes the existence of such a document as the Annual Report of the Superintendent of Education, or of such an interest as it discusses.

This writer then pays his respects to the school law itself. The constitution of the State declares that "schools and the means of education shall forever be encouraged," he says, but it would seem to be that the present law might be combated on constitutional grounds, for nothing appears more plain than that by its influence schools and the means of education are to be forever discouraged.

He says further:

> The school law of Alabama is very nearly allied to that of New York in one respect, while it is essentially different in another. On paper it will bear the most rigid inspection; indeed, it challenges the admiration of the most critical scholar. We are certain it was written by a man of unquestionable literary taste, but it was written without the slightest reference to its adaption to the State of Alabama. It provides for trustees, county and State superintendents, while the fund about which it talks and on which it was founded would scarcely pay said officers with 8 per cent interest. On paper, it compares well with the New York law. In its practical effects, it compares with the law of no State with which we are acquainted.
>
> The principal duty of the county superintendent seems to be to push up the various townships to an election of their trustees, by threatening to withhold the $1.25 per child if this provision of the law is not complied with. The business of the trustee when elected is to receive this little stipend and pay it over to the teacher. Year after year

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[1] Beginning with December, 1858.

is this little round of duty performed, and year after year no more good is accomplished than would be by making a bonfire of the money at the center of each township. * * *

The county of Mobile has long since relieved itself of the sluggish movements of the State, and has perfected a system of its own. * * * The children of this county have nothing of which to complain. Pupils in the primary and intermediate departments are educated free of charge. In the grammar and high schools tuition is $2.50 and $4 per month, respectively. Into some of these schools every child in the county is entitled to admission. In this respect Mobile has no rival in the State with which she need fear a comparison. * * * A tax of half a cent on a dollar of the property of the State would give every child within its limits an opportunity to secure an education fitting it for the duties of life.

In his fourth article, this writer says that "many persons are found ready to controvert the principle [of education] itself." He presents, also, some real difficulties. "The chasm between the wealthy and poorer classes is here far more impassable than in the North. * * * Where there is no community there can be no school."

He suggests that the amount of money needed for the schools be raised by taxation; that it be expended in building suitable schoolhouses for every 25 pupils, and that competent teachers be paid the equivalent of $1,000 per year; that a uniform course of study and uniform textbooks be adopted.

Fortunately, we have official letters in which Gen. Perry expresses himself on some of the questions discussed by the anonymous writer, and where he gives us what we may characterize as an official view of the matter. As to the general interpretation of the school law, he writes C. O. Shepherd, at Huntsville, on January 7, 1858:[1]

In pronouncing upon the school law as a whole, it must be borne in mind that it was not framed for such localities as Huntsville, but was designed to take effect over 50,000 square miles of territory, in most of which the teachers employed were deplorably ignorant, and their schools, *ex necessitate rei*, of the humblest grade.

The task assumed by the State was not only to furnish such pecuniary aid to the people as it might be able, but to set to work such agencies as might tend to improve the quality of the instruction which our youth were receiving. It was, therefore, a matter of primary concern, to elevate the standard of qualifications among the common-school teachers of the State, and by degrees to get rid of those who proved hopelessly incompetent. One of the means employed for this purpose was the supervision and inspection of the schools by men selected for the purpose. * * * The law, however, does not give them the right to prescribe textbooks or to control the internal management of the schools. * * * As a further means of improving the character of the common-school instruction, it is the policy of the law to maintain a well-defined line of distinction between public schools and those which are not. It has expressly provided that no school shall participate in the school [fund] set apart for educational purposes "unless such school shall be instructed by a teacher or teachers duly examined, approved, and employed by competent and lawful authority as hereinbefore provided."

The main object of this was to prevent worthless teachers from getting up little schools in pine-pole pens throughout the country and having the public fund frittered away upon them.

A year later his successor points out the particular classes for whom the public schools were primarily organized and the necessity of reaching them. In a letter to J. B. Speake, February 4, 1859, he says:[1]

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[1] Official letter book, 1858-1860, MS.

> The greatest difficulty in its [the school's] way now is the ignorance of the law or a disregard for its provisions manifested by the trustees. No child of the educational age can be excluded from a public school whether the school be taught by a lady or not. If such a proceeding were allowed, it might and most probably would result in the admission only of such pupils as were able to pay a tuition fee in addition to the amount arising from the educational fund and would exclude the children of the poor who are unable to pay and for whose benefit principally the fund was established. Such a construction would bring the law into merited disfavor and defeat its object, which is to extend upon equal terms to all the children of our State the inestimable blessing of liberal instruction.

These discussions, these strictures, had their influence in awakening the people to a keener realization of the importance of schools. There were signs of growing recognition. The income from public funds was: 1855, $237,515.39; 1856, $267,689.41; 1857, $281,824.41; 1858, $271,378.97.

These figures indicate that the system was growing in importance and general usefulness, but it had not yet passed the age when it was free from attack. In the assembly of 1857–58 the attack was made by no less an authority than Gov. John A. Winston himself, who in his message for that year suggested that—

> the expense of a county superintendent might be avoided by constituting the probate judge and the county commissioner in the several counties as a body to act in place of that officer. The appropriation should be applied more on the principle of equity amongst the scholars throughout the State. Severe scrutiny should be exercised in regard to the use of unsound textbooks; * * * unfortunately, as yet, our school books and teachers are imported. * * * By a prohibition of all books inculcating improper sentiments to be taught in the South, we may soon insure the possession of textbooks the work of our citizens.

Surely Gov. Winston had not read the recent history of his own State, since what was substantially this identical scheme had been abandoned only two years before.

There were also other lines of attack on the county superintendent, and for other reasons. On January 21, 1858, the minority of the senate committee on education filed a protest in which they denounced the county superintendent and declared that:

> No officer with such arbitrary power should be placed over a free people to dictate to them or their school trustees in the matter of educating their own children.

They urged that, if this county superintendent should remove or refuse to license "such teachers as the trustees should select," his office should be abolished.

In reply to all of these attacks Gen. Perry points out the necessity for the position and the impossibility of getting the work done by the judges of probate as the law of 1854 attempted. He shows also that quite as much money would be misspent for lack of supervision as this office would cost, and that this had been the actual experience in Louisiana. He then adds:

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[1] Official letter book, 1858–1860, MS.

> It is the deliberate conviction of one who has watched the progress of this movement with sleepless vigilance and solicitude, and who will not now, it is hoped, be suspected of having any personal ends to accomplish by the assertion that the system could not have survived until the present time under an administration provided for it by the law of 1854.

Perhaps the weight of the superintendent's report for 1857 was directed to the defense of the county superintendents, for that office, created by the act of 1856, became at once "a favorite point of assault by those who were unfriendly to any State system," and in that connection the hoary argument of economy had met heavy drafts at the hands of the conservatives. But another phase of the law was not far behind in the severity of the criticisms which it received. This was the apportionment of the school funds.

The senate protest of January 21, 1858, demanded first of all that the method of apportioning the school funds should be changed. They demanded that the interest on the sixteenth section certificates be increased from 6 per cent to 8 per cent,[1] and, although these certificates represented no real value, they insisted that this interest, raised by a general tax on all the counties, should be paid first of all out of the public taxes, and that after this was paid the remaining sum available for educational purposes should be distributed to all the counties "according to the number of children within the educational age within each county in the State." To justify this method of distribution, they claimed from court decisions that the sixteenth section funds were a perpetuity granted to them by the Federal Congress of which they could not be divested by law and that the State law, as it then stood, substantially making the counties without sixteenth section funds equal with those that had such funds, was unconstitutional in that it granted certain counties "exclusive privileges."

It is the old story of the rich county disliking to aid the educational work of the poor county. In their protest a table is given where it is shown that while 15 of the poorer counties paid $51,983.92 in taxes and received $7,598.51 from sixteenth-section funds, they also received in 1856, for education in addition to the above, $61,281.47 from the State. On the other hand, while 15 of the wealthier counties paid the same year $394,762.74 in taxes and received $52,177.27 from sixteenth-section funds, they were allowed from the general State tax only $45,112.18 in addition for schools.[1] But it may be answered that, according to the census of 1850, these 15 wealthier counties had 61,111 children from 5 to 20 years of age, and hence, assuming this as substantially the school population in 1856,[2] they received $1.59 for each child. The 15 poorer counties in 1850 had 46,153 children from 5 to 20 years of age, and so received, on the same basis, only $1.49 per child.

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[1] Note this demand. Art 1, sec. 3, of the act of Feb. 14, 1856, provides: "The annual interest at 8 per cent on the fund which has accrued or may hereafter accrue from the sale of the sixteenth sections of the several townships of this State," yet it is evident that the sixteenth-section fund, during the following years, drew only 6 per cent.

Supt. Perry devotes a large part of his report for 1857 to an answer of this protest. The apportionment of school funds as then provided by law was an effort to equalize the amount distributed so as to extend the benefit as nearly as might be to the State as a whole. The "violent attack at the last session of the legislature" on this principle was made in the interest of the wealthier counties, and made notwithstanding the fact that the income of the sixteenth-section fund was derived from State taxation and not from invested funds; the sixteenth-section fund itself, as it then existed, "originated with a great wrong to more than two-thirds of the people of the State." The superintendent then shows that the conditions under which the sixteenth sections and other school lands were granted the State were such as to render this so-called "magnificent donation" of public lands—

> in reality a purchase, a purchase for which a valuable consideration was paid, and paid, too, by the whole people of the whole State. The direction which the benefits of this purchase took, under the terms of the compact, constitutes the wrong alluded to. It was a wrong because a departure from that rigid impartiality which should characterize all the acts of government, even in dispensing gratuitous favors. It was a wrong, because it secured to a few of the least needy, advantages gained by the sacrifices of all. It was a wrong, too, to which the State was a party, and for which it is in a large degree responsible, because, as one of the contracting powers, it could easily have had it otherwise, as is abundantly shown in the admissions into the Union of recent States * * *.
>
> From obvious causes, it happens that, with perhaps one prominent exception, the heaviest taxpaying counties have the largest sixteenth-section funds. This fact is seized upon to sustain the views which are here combated; and the counties which may be regarded as extremes in point of wealth have been arranged in parallel columns, with the amounts received for school purposes and paid as taxes by each annexed * * *. The only legitimate conclusion to be drawn from it is that the various amounts which different localities contribute to the support of the government ought to regulate in some way the relative benefits which government dispenses in return.

The fight against the method of equalization adopted by the legislature of 1854 was waged for years, but unsuccessfully. That law itself was a compromise and was hardly less agreeable to the conservatives than to the radicals. The anonymous critic of the school law even asserts that[3] so long as the sixteenth section remained the property of the district it would be impossible to equalize to all the townships the money to be devoted to public education; he argued that conditions were such that equality could never be attained until these sixteenth-section funds were consolidated with the other funds and asks:

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[1] See protest in Senate Journal, 1858–59, pp. 235–243.

[2] Census of 1850 gives total number of children, 5–20, as 176,659; school census of 1856 gives total number, 6–21, as 171,093.

[3] Alabama Educ. Jour., 1858.

> Can not our good parent, Congress, be induced to take back its unfortunate gift and rebestow it in such a manner as not to cripple every effort made to advance the interests it was designed to promote?

In his report for 1857 the superintendent pointed out another weakness of the system, that under which the county school money was paid out by the county tax collector. He said:

> A majority of those officers do not make their collections in time to cash promptly the orders issued upon them from this office in favor of the county superintendents.

The result was that in some cases no school officer could tell how much a particular school district would receive or when that amount would be paid. The teachers were the ones who, in the last analysis, bore the brunt of this burden of uncertainty. Their salaries were nearly always in arrears, and they had only the poor choice of discounting their vouchers or waiting for months for the salaries due. And worse still, if the school funds were insufficient to pay the salaries earned, or if, through the carelessness and neglect of local trustees, funds were withheld altogether, as the law directed, the trustees went free and the teachers had no redress. The whole system was crying out for an equalization of tax burdens as well as of advantages, for a definite knowledge of the sums to be distributed per capita of school population, for greater promptness in payment, and for better informed and more earnest county and district officers.

The question of the improvement of teachers had been taken up by Gen. Perry and urged on county superintendents, local trustees, and on teachers themselves. The Alabama Educational Association was organized in 1856, and had several successful meetings. Local or county associations were beginning to make their influence felt and to give "cheering assurance of much future good." Their proceedings and addresses were published, created some discussion, and opened the way for the consideration of teachers' institutes, normal schools, public libraries, etc. Growing interest was indicated and promoted also by the publication of the Alabama Educational Journal, begun at Montgomery by Gen. Perry January 1, 1857. It led a precarious existence to the end of 1859, being once suspended and once changed in form. It died before the pressure of war was upon it, but not before it had been of service in broadening the horizon of the men who were fighting against the powers of darkness. Questions of sectional politics were not entirely absent in these educational considerations. We find them cropping out on the subject of textbooks, and it was perhaps with Gov. Winston's attitude on the matter in mind that Gen. Perry writes Hon. B. F. Porter, September, 29,1857:

> I believe that a good opportunity now exists for some one to make largely by the publication of a series of works of that description. They must be, however, fully equal, if not superior, to any extant. They must be afforded, too, on as favorable terms as any now on the market. Sectional prejudices are not strong enough to secure for a work gotten up here favor or patronage over northern ones superior in quality or cheaper in price. *Caeteris paribus*, it will have greatly the advantage, the complaints of some southern authors to the contrary notwithstanding. I * * * do hope that some plan may be devised for supplying Alabama and the South with indigenous works that shall meet the wants of our schools.[1]

Hon. Gabriel B. Duval became the second State superintendent on September 1, 1858. He completed and published the report for the year ending November 30, 1858, dated October, 1859, and we have no others till the days of reconstruction. In 1858 the school population was reported at 180,160, with an enrollment of 98,274, or 54.5 per cent, and an average attendance of 42,274, or 23.4 per cent, in 2,597 schools. The total expenditure for 1858 was given at $564,210.46, which would indicate that $292,831.49 was received by tuition and from other private sources.

Mr. Duval continued the work of organization begun by his predecessor. Besides phases already noticed, he points out that under the new State system private academies were decreasing in members and in attendance, and marks these things as indications of a change of sentiment in the State more favorable to the public system. He says:

> Indifference has not been felt toward education itself, but to governmental aid in procuring it. The happy condition of our social relations, and the general diffusion of wealth, has rendered it comparatively unnecessary; wherever it was needed, private generosity generally anticipated public aid.

He says further:

> This indifference has had another cause in an objection, rising almost to repugnance, to what was improperly supposed to be State interference with personal duties and rights, a fear of the absorption of the individual in the body politic, and of his subjection to the State.

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[1] Official Letter Book, 1858–1860, MS. As early as January, 1844, the Southern Educational Journal advertises a series of Alabama readers prepared by Charles W. Sanders: "The attention of teachers and parents is invited to the following series of readers. Complaints have long been heard of the reading books of the North, made by people whose political institutions differ from ours, and thrown upon the children of the South, for their indiscriminating minds to peruse. The books forming this series have been carefully revised and freed from all objectionable pieces." The list of other school books offered in the same connection and apparently used in the schools of the State, public and private, include:

The Child's Reader and the Rhetorical Speaker, by T. D. P. Stone; Rhetorical Reader, by Ebenezer Porter; Webster's Spelling Book and Dictionary; Olney's Geography; Watts's Improvement of the Mind; Bullions' English Grammar; Comstock's Natural Philosophy, Chemistry, Mineralogy, Physiology; Olmsted's Natural Philosophy; Worcester's Dictionary; Abercrombie's Moral Feelings; Combe on Health; Goodrich's Ecclesiastical History; Lincoln's Botany; Burrett's Geography of the Heavens; Alexander's Evidences; Willard's Histories; Hedge's Logic; Newman's Rhetoric and Political Economy; Kames's Criticism; Davies's mathematical books; Anthon's series of Latin and Greek books; Andrews' Latin books; Bullions' Greek Grammar; Levizac's French Grammar, etc.

This process of reasoning applied not only to Alabama, but to the whole South and explains to a great extent the slow growth of the public systems of education in that section.

It is evident that educational progress was being made in Alabama under the administration of Mr. Duval, but in the legislature of 1858–59 old foes with new faces again attacked the system. They now sought to abolish the office of State superintendent and give his duties to the comptroller; to abolish the county superintendents also and give their duties to the county treasurer—all in the name of economy. Gov. Winston was now nearing the term of his office, but in two years he had seen a great light. He now argues that the duties of the comptroller were already heavy; that school matters would require for him an additional clerk; so little would be saved. In the same way, if the county superintendents were replaced by county treasurers they would demand more pay and so "little or nothing could be saved in that way." He then adds:

> It occurs to me, that those who contemplate making this change have not maturely considered the subject. The education of the children of the State is one of the most sacred duties of parents and the Government. The constitution declares "that schools and the means of education shall forever be encouraged in this State." * * * Any policy calculated to cripple or retard its progress should be avoided.[1]

Such material as we have for the period 1858–1860 shows that there was a slow but steady growth; counties were better organized; schools were established and it would appear that the public funds were expended in the way least likely to emphasize the pauper school idea. The trustees went on the assumption that public funds should supplement private endeavor, and so successful was the scheme that we find, in 1858, an average school term of 6.125 months, while in some townships, as in Pickens County, the sixteenth section funds were sufficient to keep the schools open all the year.

No figures from the office of Supt. Duval are available after those of 1858, but their place may be supplied in part by those of the Federal Census for 1860:

| | |
|---|---|
| Number of schools | 1,903 |
| Number of teachers | 2,038 |
| Number of pupils | 61,751 |
| Amount derived from— | |
| Taxation | $63,845 |
| Public funds | 199,318 |
| Other sources | 226,311 |
| Total income | 489,474 |

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[1] See his message of Nov. 14, 1859, pp. 9–10 (copy in Curry Collection, not in H. and S. Jour. of 1858–59). These are substantially the identical words used by Gov. A. B. Moore in his message to the same legislature on Dec. 16, 1859. In S. and H. Jour. of that date.

There was reported in the same census 206 "academies and other schools," with 400 teachers and 10,778 pupils. These schools received—

| | |
|---|---|
| From endowment | $37,800 |
| From "public funds" | 23,547 |
| From other sources | 160,287 |
| Total income | 221,634 |

The same census reports a total school attendance for the year ending June 1, 1860, of 98,204, including 114 free colored, and that $6,256 was collected in the State for schools.

Measuring the general intelligence by the circulation of the newspaper press it will be found that according to the census of 1860 it consisted of 9 daily, 1 biweekly, 6 triweekly, 77 weekly, and 3 monthly journals, with a total annual circulation of 7,175,444 copies. The white population of the State in 1860 was 526,431, which would indicate an average of 13.6 copies per white inhabitant, but since the number of outside papers coming into the State was no doubt much larger than those which went out, the true number of copies per inhabitant was considerably larger.

Supt. Duval's report for 1858 was the last printed till after the close of the Civil War, and the source material for the period is scanty enough, for those days of excitement told heavily on the quiet routine of educational work. Supt. Duval signed the official correspondence for April 9, 1861; then there is a break till May 20, when his chief clerk, W. C. Allen, signs as acting superintendent. Mr. Duval had gone to the front as captain of a company of volunteers. But even the clang of arms did not entirely hush the hum of educational activity. In August Mr. Allen said that Gov. Moore would recommend the withdrawal (in the future) of the State educational appropriation till the end of the war, but that there would be no other change for that year unless he should be able to declare a per capita school dividend of $1.35 or $1.40 instead of the $1.30 declared "for the last two or three years." In 1861–62 the dividend was $1.20 per capita; in 1862–63 it was $1.10. In 1860 and 1861 the auditor's report shows that the total school expenditures were $567,740, or $283,870 per year; in 1862 it was $231,774; 1863, $268,731; 1864, $233,978; 1865, $112,783.

These sums do not include $17,700 spent in 1860–61 and $10,718.75 spent in 1861–62 on the military training of "State cadets." These expenditures were incurred under the act of February 21, 1860, which provided "for the military education of two young men from each county." They were to attend the Military School at Glenville, in Barbour County, or that at La Grange, in Franklin County, to both of which the State had furnished arms. They were to receive for their support $250 a year, and for their part agreed to return to their own county "and there teach and drill the militia" for the same length of time as they had received State support in school.

There was in Alabama, of course, as everywhere, trouble over the falling value of Confederate notes, and much correspondence with local officers on the subject. Capt. Duval was again in his office March 14, 1864, but sterner military duties called him elsewhere, and W. C. Allen served as superintendent for the remainder of that year, being succeeded in office January 1, 1865, by John B. Taylor.

The correspondence of the superintendent during the war period is small in amount, broken and fragmentary in character, but sufficient to show that the schools did not lose their general organization. As has been shown from official sources, funds were distributed each year, reports were called for and schools were still being taught throughout the State as late as March, 1865.

Fortunately for the student of the educational history of Alabama, the official letter book of the superintendent for the whole of the war period (June 1, 1860, to April 25, 1865) has been preserved and has been made available for this study by the courtesy of Thomas M. Owen, LL. D., director of the Alabama State department of archives and history. It seems well to close this chapter with the transcription of four letters written in March, 1865, by Supt. Taylor that tell far more dramatically than mere narrative the difficulties and trials of the last days:

March 1st, 1865.

To His Excellency,
Gov. Thomas H. Watts:

The revised school law of the State requires of the State superintendent of education annually on the 1st of March, a report to the governor, embracing—

First, A brief history of his labors.

Second, An abstract of the reports received by him from the county superintendents, exhibiting the condition of the public schools.

Third, Estimates and accounts of expenditures of school moneys.

Fourth, Plans for the improvement of the school funds and the better organization of the public schools.

Fifth, All such other matters relating to his office and to the public schools as he shall deem fit to communicate, etc.

At the time of my election to the office of State superintendent, my predecessor, Hon. W. C. Allen, had nearly completed the calculations for the distribution of the funds for 1864, and deeming it unwise and impolitic to take possession of the office until that was completed and the quarter expired, I did not file my bond and enter upon the duties until the 1st day of January, 1865. Consequently, the history of my labors would be very brief and unsatisfactory. Under this head I have nothing to report except an official visit to the County of Coosa, where I had the pleasure of meeting in county convention the superintendents and several of the teachers and trustees of that county, and to initiate an undertaking which I hope will result in furnishing our public schools with abridged textbooks to supply a want now severely felt by parents and teachers.

The reports of the condition of the public schools for the year 1864 have been received from only 15 counties, leaving 37 counties unreported. Many causes have occurred to prevent their reception. Many teachers have been called into the military service and made no reports to the county superintendents; others have neglected their duties; in some instances I am informed of changes in the office of county superintendent during the month of January, and in others, I am assured that the reports have been mailed and failed to reach this office. All the county superintendents, not within the enemy's lines, have been informed by letter of this default, and duplicate or original reports may be expected. Without the missing reports it is impossible to approximate the conditions of the public schools within the State.

And as plans for the improvement of the school funds and the better organization of the public schools are expected to be submitted in the report of the State superintendent and must be based upon the reports received from the county superintendents, and as this report is intended to furnish information to superintendents and trustees and the authorities of other States of the actual working of our State system of education, and as under the circumstances named it must necessarily be imperfect and unsatisfactory, I therefore submit this as a partial report and respectfully ask your Excellency's permission to complete the same at some future period before the session of the general assembly, when with more reliable and fuller data, more satisfactory information can be given and the suggestions contemplated by the law can be made upon a reliable basis.

I would beg leave further to state to your Excellency that the reports made by my predecessors bear date of the month of October, ever since the passage of the act of 1856.

Very respectfully, your obdt. servt.

JNO. B. TAYLOR.

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MARCH 11TH, 1865.

W. H. HUSTON, Esq.,
*Co. Sup't, Dallas Co., Selma, Ala.*

DEAR SIR: I am much gratified to learn from your letter of the 8th inst. that the absorbing and engrossing interest of the times and the perilous condition of the country have not retarded the educational interests of the populous and wealthy county which you represent, and that parents evince an "enthusiastic interest in the education of their children." Of a truth "Carpe diem" should be the motto of our people at this time, for "we know not what a day may bring forth," nor how soon present advantages may pass away before the invasion of a ruthless foe, or how even their sons may be called away from the pursuits of learning to the more immediate and pressing necessity of defense.

I trust that the wisdom of Congress may adopt some plan whereby disabled soldiers and officers, unfit for duty in the field, may be retired, and thus competent instructors from among the educated take their places as instructors of the rising generation. An accomplished officer, formerly a teacher, and now himself maimed and unable to resume his command, informed me that there are many such now spending their time in idleness or assigned to duties for which they are incompetent. He also stated that he had mentioned the matter to Members of Congress and that he hoped they would take such action as would lead to beneficial results. Let us then wait in hope.

I am pleased with your plan for procuring schoolbooks and trust you will meet with eminent success. It should certainly be adopted in every county when practicable, and has been acted upon to some extent by the booksellers of this city.

Prof. B. T. Smith, of Central Institute, is now engaged upon an abridged arithmetic for the use of public schools and has completed the work as far as division. When that is completed I shall request him to publish, if a publisher can be obtained, leaving the remainder for a future edition. This part will answer for primary classes and will supply a present want. If encouraged in this undertaking, the professor will enter upon abridgments of other schoolbooks. * * *

You will oblige me by giving me notice of the time and place of holding your county convention. It is my desire to visit as many as the limited time at my command will permit.

Very respectfully, yours,

JNO. B. TAYLOR,
*State Supt.*

MARCH 14TH, 1865.

To His Excellency, THOMAS H. WATTS,
*Governor of Alabama.*

GOVERNOR: I have the honor to call your attention to the inclosed copy of a letter from Col. Jefferson Falkner requesting the discharge of Harman R. Gay, corporal in Company K, 46th Ala. Vol. Regiment, in consequence of his election as county superintendent of education for Randolph County.

Mr. Gay was duly elected in May, 1864, and gave bond, which is on file in this office, as required by law. I understand your excellency to recognize to the fullest extent the right of the citizens of the State in the election of their officers, and yet if the officer of their choice is detained in the military service, the exercise of that right is of no avail and of no practical utility.

The authorities of the Confederate Government do not pretend even to claim military service from State officers not enrolled at the time of election and their exemption from such service is provided for by law.

The reason for this exemption, founded in the principle of State sovereignty, and the unqualified and unrestricted right of the people to the choice of their officers, applies, to my mind, with equal force in those cases where parties are, at the time of election, held in the military service of the common government.

But if doubt exists upon that point, comity and courtesy as between the Confederate and State Governments would require that the expressed will of the people should be respected and that they should be allowed the services of the officer of their choice in any capacity in which they may elect; and this without regard to the rank of the office or distinction of station. That this has been the view of the Legislature of Alabama is apparent from the fact that there is no provision of law whereby an office may be declared vacant by reason of the incumbent being in the military service of the State or of the Confederate States, though it may be for several other reasons.

The office of superintendent of education for the several counties in this State can not be discharged by deputy; and while the payments of the school fund to the trustees may be made by a clerk, the receipts of money from tax collectors and the State treasury, examination of teachers, granting of licenses, annual visitation of schools, and decision of questions arising under the school laws must be done and made by the superintendent in person, and can not be delegated by him to others; nor does the law make any provision for the discharge of those duties by another while the incumbent is in military service.

I would, therefore, respectfully request that your excellency would refer this case to the Hon. Secretary of War and ask the discharge of Corp. Gay from the military service, that he may enter upon the duties of his office. To judge by the returns now being made to this office and the information received from various parts of the State, the children of our gallant soldiers are not to any large extent enjoying the benefits of the provisions made by the State for their education by reason of irregularities, such as is seen in the present case, and which can only be corrected by a vigorous application of means at command, and the evil of an ignorant generation succeeding this arrested. A prudent government will seek its defense and safeguard in the hearts of an intelligent people.

I am, very respectfully, your obdt. srvt.,

JNO. B. TAYLOR,
*State Supt.*

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MARCH 22ND, 1865.

To His Excellency THOMAS H. WATTS,
*Governor of Alabama.*

GOVERNOR: I have the honor to inclose a communication from Hon. James F. Bailey, judge of probate of Perry County, requesting my attention to condition of the public schools in that county in consequence of the detention in the Confederate

States military service of M. M. Cooke, county superintendent of Perry County, and asking that steps be taken to procure his discharge.

Mr. Cooke is 1st sergt., Co. G, 4th Ala. Vol. Regt., and was elected county superintendent in May, 1864, and gave bond and duly qualified for the performance of his office, but though, as I am informed, two applications have been made for his discharge, he is still retained in service to the detriment of the educational interests of his county.

On the 14th instant I had the honor to address your excellency a similar application in respect to Corp. Harmen R. Gay, Co. K, 46th Ala. Regt., elected and qualified as county superintendent of Randolph County, and herewith I forward a copy of your excellency's indorsement upon that letter, satisfied that your views, being fully matured, have undergone no change, and that the same principle therein asserted by your excellency fully applies to the present case.

I am also informed in the case of Mr. Cooke that he has been wounded in the leg and in consequence of that wound is partially, if not wholly, unfit for field service.

The educational interests of Perry County are suffering from the absence of the superintendent, and if the condition of that and Randolph County should become general throughout the State, our educational system must be abandoned and the children of our soldiers grow up in ignorance.

I respectfully request that your excellency will use your official influence with the Hon. Secretary of War to procure the discharge of Sergt. Cooke, that he may enter upon the duties of his office.

Very respectfully, your obdt. servt.

Jno. B. Taylor,
*State Supt. of Education.*

The remainder of this war history and the fortunes of the public educational records themselves may be gathered from the Hon. John B. Ryan, State superintendent in 1866–67, in his report dated April 1, 1866:

> There has been no annual report made from this office since October, 1859,[1] yet our system of public schools was kept up till the appointment of the provisional governor in July, 1865, although amidst embarrassments incident to a state of fierce warfare. The records, books, papers, etc., of this office were carted about the country in boxes, to keep them from the hands of spoilers, during the most of the time after 1863. Their preservation is chiefly if not alone due to the vigilance, zeal, and activity of my worthy predecessor, the Hon. J. B. Taylor, to whom the friends of education in Alabama should ever feel grateful.[2]

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[1] This was Duval's report for 1858.

[2] Report for 1865 quoted in Owen's Bibliography of Alabama.

# Chapter VIII.

## RECONSTRUCTION IN THE PUBLIC SCHOOLS, 1865–1876.

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### I. THE INTERMEDIATE PERIOD, 1865–1868.

The war came to an end in May, 1865. The reconstruction government in Alabama was inaugurated July 13, 1868. This intermediate period of three years—a period not of the old nor yet of the new—is largely barren of educational results, although demanding some consideration from the historian of education. A convention sitting in Montgomery adopted on September 12, 1865, a new constitution. This convention was made up of Confederates and other native sons, and their work was not submitted to the people. There is no mention of education in this constitution, nor are there complete printed reports from the State superintendents for the period. Information on the subject comes mainly from later superintendents. As has been seen, John B. Taylor became superintendent on January 1, 1865, and served in that capacity until about April 1, 1866. He was succeeded by John B. Ryan, who served till November 30, 1867. Then came M. A. Chisholm with service from December 1, 1867, to July 23, 1868, when reconstruction began.

Of the period represented by the school years 1865–66, 1866–67, and 1867–68 (June 30), Dr. Cloud, in his first annual report dated November 10, 1869, says:

> I found that the previous government under the administration of Gov. Patton failed to pay the public-school money apportioned for the school year 1866 to quite a number of the counties of this State. It also failed to pay the public-school money apportioned for the school year of 1867 to a much larger number of the counties. Some of the county superintendents received the public-school moneys thus apportioned for the years 1866 and 1867, either in part or in whole, as our books show; but others received none whatever notwithstanding public schools were taught. There seems to be no satisfactory reason to be had from any source explaining why it was that some of the counties received their apportionment of these public-school funds, while others did not obtain any portion thereof.
>
> The superintendent * * * takes the position that the apportionment of the public-school fund for the years 1866 and 1867 was appropriately made under existing laws of the State, and that the State is bound in all good faith to her citizens to make good this apportionment of the public-school fund to the counties that have up to this time failed to receive it or so much thereof as may be necessary to pay the school service rendered in such counties for the school years of 1868 and 1869.

So much for Dr. Cloud's review. Now, what were the original appropriations for these years, how much of these sums were used by Gov. Patton "to meet other pressing debts of the State," how much did the reconstructionists appropriate to cover these deficiencies, how did they order this money to be used, and what actually became of it?

The total apportionment for 1866 was $413,389.07, of which $362,223.60 was drawn and $51,625.09 undrawn. In 1867 the figures were $290,250.12 apportioned, $133,195.83 drawn, and $157,054.29 undrawn. The sum apportioned for schools December 1, 1867, to July 1, 1868, was $45,411.46. On November 10, 1869, there was still unpaid out of these three appropriations $254,090.84. On October 10, 1868, the reconstruction legislature provided $45,411.46 to meet—

> the claims of teachers arising between December 1, 1867, and June 30, 1868, * * * which it was doubtless believed at the time the bill was introduced would cover all just and legal claims embraced within the period.[1]

February 23, 1870, it passed another act—

> appropriating the sum of $208,679.38 to cover the several amounts due and unpaid to those counties whose school moneys had been used by Gov. Patton to meet other pressing debts of the State.

The act provided that this money should be disbursed "in accordance with the law under which the said amounts were apportioned at the time of apportionment," and then adds that the provisions of this act should "be so construed as to include all teachers who have taught a free public school and have claims against the State without distinction on account of race or color."[2]

Supt. Cloud had already decided officially (June 26, 1869) that under the law negroes were entitled to their share of the sixteenth-section fund,[3] and the purpose of this particular act to admit the teachers of negro schools to a participation in the fund about to be distributed is manifest. Says Supt. Joseph Hodgson (Conservative), in his report dated January 28, 1871:

> This sum of $208,679.38 * * * was apportioned among the counties by the late superintendent (Dr. Cloud) according to the amounts certified to be due. * * * In what manner this money has been disbursed by the county superintendents the present State superintendent is not fully informed. * * * It will be observed that the act making the appropriation fixes a proviso to it, a proviso which is doubtful, because the fund was justly due to those teachers alone who were employed under the then-existing school laws. The proviso read thus: "That the provisions of the foregoing act shall be so construed as to include all teachers who have taught a free public school and have claims against the State, without distinction on account of race or color." The purpose of this proviso must be transparent. There were no colored teachers of State schools before July, 1868, and no colored

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[1] See acts of Oct. 10, 1868, Laws of 1868, p. 255; and act of Feb. 23, 1870, Laws of 1869-70, p. 168.

[2] See acts of 1869-70, p. 169.

[3] See official letter book under that date.

pupils except such as were recognized by the military commander between January and July, 1868; yet, as will presently be seen, an opportunity has been given for the misappropriation of this entire fund.

In discussing the payment of these past-due claims, including those for teaching December 1, 1867, to July 1, 1868, Supt. Hodgson says further:

> The superintendent can only say that under his predecessor the above-mentioned sum of $45,411.46 was distributed to the several county superintendents without reference to the amount of unpaid claims held in any given county, but in proportion to an enumeration of white and colored children made in 1869. It is with reluctance that he has been driven to the conclusion that the acquisition and distribution of this sum of $45,411.46 and the larger sum appropriated for the years 1866 and 1867 [$208,679.38] is the result of a deliberate scheme to divert the public-school funds of the years 1866, 1867, and 1868 from their legitimate use and for the benefit of private schools which were established and conducted for private gain or for the promotion of political and sectarian ends.

Supt. Hodgson bases this conclusion on a certain enactment of the State board of education, the intention of which—

> was evidently to give a color of authority to the newly appointed county superintendents for the disbursement of public money to private schools of a certain character. Under cover of this act large sums of money which had been turned over by township trustees to the new county superintendents, as also the several appropriations referred to, were squandered upon teachers of private schools who were in no wise connected with the public-school system, and who had already received pay from their patrons for their services.

Specific instances are given by the superintendent: The county superintendent of Montgomery County paid himself $1,692.60 for teaching a private school, and his account was allowed; and there was paid to a colored institution in Mobile at one time the sum of $5,327 and at another $5,425, although it was under the support and control of a missionary society and its teachers had already been paid by that society. Up to the date of this report there had been paid out of this $45,411.46 only $9,019.02 of legitimate claims.

Supt. Hodgson failed to secure any further information on the subject, and adds:

> It is probable that the great bulk of that fund has not been and will not be applied to the object for which the general assembly appropriated it. Such is one of the evil results of having two legislatures over this department. The disbursing legislature runs counter to the spirit of the appropriating legislature, and the State superintendent remains powerless to provide a remedy for transparent abuses.[1]

The protest of the superintendent was in vain, for so far as available sources show there was no further investigation of these arrears nor of the way they were expended. According to his report on November 15, 1871, of these special appropriations $114,782.88 was still to be accounted for.

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[1] This refers to the new board of education, considered later.

### II. THE OLD RÉGIME AND THE NEW, 1868–1872.

The constitution of 1868 was adopted by a convention which sat in Montgomery November 5 to December 6, 1867. This is the reconstruction constitution; it was submitted to the people and ratified February 4, 1868. Like that of 1819, it makes formal recognition of education as a part of the duties of the State, but it is sharply differentiated from the earlier document and from all of its own day, except one, by the creation of a new and distinct governing authority in education. It placed the common school and the public educational institutions, including the university, under the management of a new board, styled the State board of education, of which the superintendent of public instruction was declared president, the governor an ex officio member, and to which were added two elected members from each congressional district. It was given authority—

> to exercise full legislative powers in reference to the public educational institutions of the State, and its acts, when approved by the governor, or when reenacted by two-thirds of the board in case of his disapproval, shall have the force and effect of law, unless repealed by the general assembly.

The constitution said further:

> It shall be the duty of the board to establish throughout the State, in each township or other school district which it may have created, one or more schools, at which all the children of the State between the ages of 5 and 21 years may attend free.

It recognized the old educational fund of ante bellum days, declared it to be a "perpetual fund," and in addition to these sources donated to education "one-fifth of the aggregate annual income of the State." The assembly might give power to the local authorities to levy a poll tax, and "a specific annual tax" was to be levied—

> upon all railroad, navigation, banking, and insurance corporations, and upon all insurance and foreign bank and foreign exchange agencies, and upon the profits of foreign bank bills issued in this State by any corporation, partnership, or persons—

to be devoted exclusively to the maintenance of public schools.

The new régime began July 13, 1868, with the meeting of the general assembly, the ratification of the fourteenth amendment, and the inauguration of W. H. Smith as the first reconstruction governor. One of Gov. Smith's first acts was to appoint Dr. N. B. Cloud, who had been more or less in public life under the old régime, as superintendent of public instruction (served till November 23, 1870). On the same day the new State board of education met for its preliminary organization.

The new school system itself did not differ greatly from the ante bellum one, except that the new constitution declared the schools to be entirely free. It was top-heavy, however, with the number and character of its administrative officers, who either from design or otherwise were to absorb a large share of the public funds before they reached the schools. The stream could rise no higher than its source, and Dr. Fleming characterizes the school officers appointed by Dr. Cloud as "a forlorn lot." One signed for his salary with an X mark; another was of bad morals and incompetent; another was a preacher who had been expelled for misappropriating charity funds.[1]

One of the earliest acts of the new reconstruction legislature was to transfer to the board of education control of unexpended school funds in the hands of school officers and to authorize an investigation of these funds by the new county superintendents who were then being appointed by the State superintendent. It also chartered lotteries, on condition that they pay an annual tax to the school fund. The Mutual Aid Association, whose object was "to distribute books, paintings, works of art, scientific instruments," etc., was to pay $2,000 annually; the Mobile Charitable Association was to pay $1,000. The office of commissioner of lotteries was established and his duty was to levy and collect 1 per cent "on the gross amount of sales or the gross income of the business of all lotteries now authorized or that may hereafter be authorized by law in this State."

Other laws were passed to make more thorough the transfer of the school machinery to the new authorities, and it was ordered that the public schools should be opened by October 1, 1868, "as far as practicable." Eleven normal schools were established, the expenses of which were to be paid out of the general school funds, and a law was passed "to secure cooperation with the Bureau of Refugees, Freedmen, and Abandoned Lands." This law provided that the State superintendent should act on the "general understanding" that (1) the bureau was to furnish school buildings; (2) the missionary associations were to select and transport competent teachers to the scene of their labors; (3) the State was to examine and pay these teachers; and (4) the superintendent was to secure the transfer to the State of schoolhouses controlled by the bureau.

Another act, general in character, defined the rights and duties of the State superintendent, the county superintendent, and the local teachers. These did not differ in essential detail from those in earlier laws. But it should be noted that the races were to be kept entirely distinct, "unless it be by the unanimous consent of the parents and guardians of such children."

For its part the board of education began with an abundance of legislation, but it is difficult to say how many of these laws got into school practice. Some were in advance on the old order, e. g., requiring reports on school moneys; furnishing schoolhouses and defining more exactly the duties of school officers; providing for certain city systems; fixing the grade of teachers, and providing for teachers' examinations and for normal schools; defining the scholastic year; and defining and establishing grades in the schools. These grades were fixed at four, and the subjects to be taught were outlined.

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[1] See Fleming: Civil War and Reconstruction in Alabama, (1905), p. 609.

With these rules and regulations the new school system went into operation with Dr. Cloud as State superintendent, and the reconstruction State board of education endowed with the power of legislation. The real difficulties of the schools during this period fell into one of two general categories. In the first place, it was difficult to secure local officers to administer the law; for the Conservatives naturally stood in a hands-off attitude. The second difficulty was no less serious. The constitution provided that the school should be absolutely free, and while the available funds were not sufficient to secure this, no tuition might be charged. As a result of this dilemma, the schools established were neither sufficient in number to serve the State nor long enough in term to serve the children. Or, as Supt. Hodgson put it in 1871:

> The result of this rule was that a large number of schools were opened, but they were generally schools which accomplished nothing. There were too many pupils for the teachers, and too many teachers for the fund. The sum total of schools and pupils made a large show upon paper, but the school was generally closed before the pupil had time to learn the alphabet.

It does not appear that there was much serious opposition to the schools. It is true that Dr. Cloud complains loudly of "idle politicians" and "disappointed newspaper editors" and prints letters from five county superintendents "detailing the character and extent of trouble and opposition they had in the appointment of trustees," but this was mere politics, directed more at the men in authority than at the system, and Dr. Cloud said that after his opponents had had "their minds disabused" of "blind prejudice" they became "friends and warm supporters of the system" and hailed it as "a great national benefaction." What opposition there was grew largely out of the old ante bellum idea of hostility to "free" or "pauper" schools. The leaders of this wing were not friendly to an education that was given away, and this hostility was intensified by the requirement of the new constitution that the schools should be entirely free and no longer supplemented by private contributions and subscriptions as had always been the case in Alabama up to 1868. This requirement, indeed, acted as a two-edged sword. By forbidding these supplementary contributions it increased the number of those opposed to public education, and at the same time made the system less able to furnish free instruction. When the Conservatives came back into power in 1870, the old idea of supplementing public funds with private subscriptions was revived.

As for the education of the negroes, there was little opposition to that as such. The old slaveholders believed it to be necessary for the good of society. The Democratic party favored it; Gen. Clanton, the chairman of their executive committee, made speeches supporting it; Gen. John B. Gordon, Hon. J. L. M. Curry, Col. Jefferson Falkner and Ex.-Gov. A. B. Moore were all its advocates. The Montgomery Advertiser and other papers even urged that destitute whites and disabled soldiers be employed as teachers. Confederate soldiers and Confederate widows taught negro schools, and the old school board of Mobile was organizing negro education in that city before the system of reconstruction was born.[1]

The story of the struggle in the city of Mobile between the old régime and the new is interesting and highly dramatic.

In Mobile, it will be recalled, throughout the whole period after 1826 a separate school organization had been maintained, free from all State trammels. Progress had been made there beyond all other sections of the Commonwealth, and the efforts of the reconstructionists to bring this independent system under State control precipitated a struggle that lasted as long as reconstruction itself. The Mobile schools had survived the greater part of the war; they had closed only with the Federal occupation in April, 1865, and had opened again in the fall of that year, but on a more restricted scale and with moderate charges for tuition to supplement decreased public funds. The receipts for the year 1865–66 were $35,017.16, of which about $22,000 was from tuition charges.[2] The expenses for the same time were $44,191.86. For the year 1866–67 tuition fees were reduced one-half, and a movement for the education of colored children started as early as May, 1867. Mr. Clark, for the school committee, then reported that he had been in communication with the local superintendent of the Freedmen's Bureau who expressed gratification at this manifestation of local initiative on the part of the old conservative element, and that $12,000 had been provided by the bureau for a schoolhouse for colored pupils. The local board also sought to work in harmony with the American Missionary Association. For the year ending July 31, 1868, their total receipts, including tuition fees and money borrowed, was $64,835.29, and their total disbursements $62,180.86.

From this account, abbreviated from the History of Education in Alabama by Willis G. Clark, a writer who for this part of the story is an original authority, we must conclude that the Mobile schools were slowly recovering from the effects of the war; that their local finances were improving; and that they were again headed in the direction of a public school system which should be entirely free. We note further that under liberal and progressive leadership these school commissioners, though Conservatives, had voluntarily taken up the subject of educating the negro, and were making progress. It was into this scheme of harmonious development that the reconstructionists broke.

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[1] See Fleming: Civil War and Reconstruction in Alabama, pp. 623–631.

[2] An act of Feb. 9, 1866, allowed Mobile to levy on each $100 of property valuation a 5-cent tax for suitable houses, libraries, and apparatus.

The reconstruction government had gone into effect July 13, 1868, and by an act of August 11 the new State board of education declared vacant all offices of county superintendents, township trustees, and school commissioners. Dr. Cloud, the State superintendent, then proceeded to the task of filling these offices with men of his own selection, and on August 18 appointed George L. Putnam county superintendent of Mobile. The old Mobile board of school commissioners had been appointed originally under military authority. They now proceeded to act on the assumption that the acts of the legislature and of the State board of education were illegal, as far as they were concerned. Putnam appeared before them demanding recognition as county superintendent, but "not having filed a satisfactory bond, as required by law, the board did not inquire further into his authority or the legality of his appointment."

The war was now on between the Mobile school commissioners, made up of both Republicans and Conservatives, on the one hand, and the board of education, the State superintendent, and the Mobile county superintendent on the other. Compromises were proposed and rejected. Then recourse was had to the courts, and a mandamus was secured ordering the school commissioners to surrender the books and property in their possession. This they refused to do, and they were held in prison for 48 hours where they were "the recipients of innumerable courtesies and attentions from the officers of the jail and the citizens of Mobile generally." The supreme court decided in their favor; they were released, and the school year of 1868–69 conducted under their direction showed a white school enrollment of 2,417 and a negro enrollment of 919. In the first round they had had all the advantage. But the State officers were plucky and had other weapons in reserve. On June 30, 1869, the State superintendent formally suspended the Mobile school commissioners, and on August 19, 1869, his action was approved by the board of education. They had still one other weapon. Under the law as it had existed substantially since 1826, Mobile had its own school organization, collected its own taxes, and was expressly excepted from being amenable to the State authorities except to the extent of drawing its quota of State funds and making reports. But the constitution of 1868 had given to the State board of education "full legislative powers" in reference to the public educational institutions of the State, and on November 19, 1869, an act was passed by the board repealing the law which gave special immunities and powers to the school commissioners of Mobile. By this bold stroke the board disarmed its rivals and at once made itself master of the educational situation in the State. After the passage of this act the State authorities refused to pay over to the Mobile school commissioners the proportion of the school moneys due them from the State. The State superintendent, though he had vacillated and sought to heal the breach by appointing a county superintendent agreeable to the board of school commissioners, now recognized Putnam as county superintendent and paid him considerable sums out of State funds.[1] As a last resort the old school commissioners sued out an injunction against Putnam and sought to prevent him from collecting the money on these State warrants. The case came up before the supreme court in June, 1870. In a long and elaborate opinion, in which the whole history of the Mobile school system is reviewed at great length and the more recent educational legislation of the State reviewed and examined, the contentions of the attorneys for the school commissioners were rejected in toto and the injunction dissolved. After the announcement of this opinion, the school commissioners, disheartened and broken, defeated at every point, surrendered the school property to Putnam. Viewed from this distance and in the cold light of history, it would appear that whether the law was good or bad was immaterial; it was the law and was clearly on the side of Putnam; for, if words mean anything, the old board of school commissioners was clearly removed from office by the act of August 11, 1868, and all of their subsequent actions were illegal. On the other hand, it is just as clear that, had the reconstruction authorities kept hands off in Mobile, the progress of education would have been immensely advanced. The new system was forced on the people and maintained over them, but it was not welcome, and progress was slow. Putnam remained at the head of the schools till the spring of 1871. Indeed, it would seem that he did not release his claims to be county superintendent till November 24, 1874, for on that date we find John M. McKleroy, State superintendent, invoking against him the very weapon he had used against the old board, for he was then, with the consent of the board of education, formally removed from office as superintendent on the ground that he had not filed his bond "as required by law" and that the "public welfare" did not demand that "any change should be made in the county superintendency."

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[1] The matter was thrashed out by the judiciary committee of the assembly of 1870 who reported that through the "illegal conduct" of Cloud and Putnam the latter had obtained on January 29, 1869, between $5,000 and $6,000, and "by far the greater portion thereof was unlawfully applied, if not the whole amount thereof was illegally used," in paying certain teachers and employees of the "Blue College" in Mobile which was then conducted by the American Missionary Association; that in July, 1869, Putnam secured a warrant for over $9,000 which he was restrained by injunction from collecting; that he received $2,000 or more for lawyer's fees; that he received $3,600, "a part, if not all of which, was illegally used or applied." They found also that unreasonably high salaries had been allowed. They recommended the abandonment of special school legislation as soon as possible; the passage of a law forbidding any person from holding more than one office in the entire school system; the adoption of a uniform compensation for all county superintendents and a general reduction in the pay of all officials, for these were partaking "too much of the quality of a sponge to the amount of funds raised for school purposes."—See Report of Judiciary Committee, 1870.

This action had been made possible by a partial defeat of the Republican Party in 1870, when the Conservatives again secured control of the State superintendency (Nov. 23, 1870). They then began a reorganization of the State board of education and at once passed a law (November, 1870) giving Mobile the right of electing its own superintendent and school commissioners. In this way, says Mr. Clark, the old—

> order was gradually restored and the schools were placed once more in good working condition. There was still a board of commissioners, but they had little power under the law and, practically, were simply advisers of the superintendent. The board, however, was made up of some of the best citizens of Mobile County.

With the constitution of 1875 Mobile again attained the degree of autonomy which she had enjoyed in ante bellum days, since by that instrument she was again declared independent of the State system except as to drawing her quota of State funds and making reports. These privileges were formally recognized in the general reorganization act of February 8, 1877.[1]

After this digression into the history of education in Mobile, which clearly illustrates the difficulties the system was forced to encounter because of politics, it is possible to turn again to the State system and consider its sources of income.

These were, besides the income on the old perpetual (paper) fund, including also certain fines, licenses, donations, and taxes from corporations:

1. A poll tax on all males 21 to 45 years of age. (Constitution.)
2. A special county tax of 10 cents on $100. (Revised Code, sec. 992.)
3. An annual donation from the State of $100,000 under section 957 of the Revised Code.
4. One-fifth of "the aggregate annual revenue of the State." (Constitution.)

But as already seen, these sums were not enough to establish successfully a State system of free schools; nor were funds from all of these sources immediately available. For the school year October 1, 1868, to September 30, 1869, the funds were divided as follows:

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|---|---|
| Balance due and appropriated as per act of Oct. 10, 1868 | $200,000.00 |
| Interest on sixteenth section fund, at 8 per cent | 136,812.59 |
| Interest on valueless sixteenth section fund, at 8 per cent | 7,967.30 |
| Interest on surplus revenue fund, at 8 per cent | 53,626.94 |
| Amount received from retail licenses | 26,514.85 |
| Appropriations as per the code, section 957 | 100,000.00 |
| Total | 524,621.68 |

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[1] See Cloud's account of this contest in the appendix to the Report of Supt. Pub. Instruction for 1869; also in Journal Board of Education, July and August sessions, 1869. The side of the school commissioners may be seen in Clark's History of Education in Alabama, Washington, 1889, based on The Board of School Commissioners and the Public School System of the City and County of Mobile, 1869. See also 44 Ala. Sup. Ct. Reports, case of Mobile School Commissioners v. Putnam et al., and the Report of the Judiciary Committee (1870).

As was to be expected, the weakness of the system and the inexperience of its administrators were soon manifest. The legislature had levied no tax on property and no poll tax for school purposes, but depended on the earnings of the perpetual (paper) fund and on the $100,000 straight appropriation from the State; the superintendent's office was slow and did not publish its county apportionments for the school year 1868–69 till June, 1869. In the meantime the county school officers had opened schools and employed teachers in utter ignorance of what was coming to them from the State. The inevitable followed. Says Supt. Cloud, in reviewing the work of the year:

> There are many most excellent and worthy teachers, both gentlemen and ladies, in almost every county of the State who have failed to receive full pay for their services in the free public schools—some for one month, some for two months, and some for even more—from the fact that when the delayed apportionment went out to the county superintendents it was found that the amount of teachers' salaries for services already rendered was greater than the apportionment to the township in which such schools were taught. Then the practice was with the county superintendents to scale down the accounts of these teachers, pro rata, to fit the apportionment.

The total expenditures for the year were more than $502,156.19, which sum had been disbursed up to the time Dr. Cloud made his report. He was negligent in his statistics; his successor furnishes figures for him. Mr. Hodgson, in his special report in 1871, gives the number of schools in 1869, as by estimate, 3,225, and the pupils enrolled as 160,000. The amount expended for county administration and supervision was $75,173.92, which was chargeable against county funds. The superintendent reports 2,902 teachers and nine normal schools with 300 prospective teachers who were being trained at an annual cost of $12,000. These normal schools seem to have been really normal classes in connection with other institutions. Tuition fees were paid by the State in return for a promise to teach for two years in the public schools. It is evident that they did not appeal to the Conservatives:

> It is not known by the superintendent [Hodgson] what progress has been made by these pupils, what interest they exhibit in learning, what assurance the department had as to their capacity, intellectually or morally, or whether any of them were prepared, during the year 1869, or the year 1870, to assume the duties of teacher, or whether any of them actually entered upon such duties. The subsequent abandonment of the schools, it is fair to presume, has resulted in a loss to this department of $12,000 for the year 1869 and $25,000 for the year 1870.[1] It was an unwise policy to have established, such a number of normal schools at the outset.

Another accomplishment of the reconstructionists—one in which they again came into antagonism with the old decentralized, independent system of the earlier days when every community was a law unto itself—was in the adoption of a State system of textbooks. The books adopted included Parker and Watson's Readers, Davies's Arithmetics, Monteith's Geographies, Clark's Grammars, Monteith's and Willard's Histories, and others.

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[1] The exact cost was $16,582.10.

Dr. Fleming, in his Civil War and Reconstruction in Alabama, says (p. 623) that this adoption was the work of Dr. Cloud and that the texts were "objectionable to the majority of the whites." Dr. Fleming adds further:

> This was especially the case with the history books, which the whites complained were insulting in their accounts of southern leaders and southern questions. Cloud was not the man to allow the southern view of controversial questions to be taught in schools under his control. About 1869 he secured a donation of several thousand copies of history books which gave the northern views of American history, and these he distributed among the teachers and the schools. But most of the literature that the whites considered objectionable did not come from Cloud's department, but from the bureau and aid society teachers, and was used in the schools for blacks. There were several series of "Freedmen's Readers" and "Freedmen's Histories" prepared for use in negro schools. But the fact remains that for 10 or 15 years northern histories were taught in white schools and had a decided influence on the readers. It resulted in the combination often seen in the late southern writer—of northern views of history with southern prejudices.

For the work of the school year 1870, which in reality covers the period from October 1, 1869, to January 1, 1871, we must look not to Dr. Cloud, who was in authority till November 23, 1870, but to his successor, Col. Hodgson. The white schools were reported as 1,355 in number and the colored as 490, making only 1,845, as against an estimated total of 3,225 for 1869. The white children numbered 229,139; the negro children, 157,918; total, 387,057. This gave an apportionment of $1.15, as against $1.20 per child for 1869. There was apportioned $464,496, but at the end of the year $99,825.27 was still undrawn, although "teachers have been clamorous for their pay for months." Why this decay in school interests and sharp decline in the number of schools and in payment of teachers? It is impossible to assign a more satisfactory reason than that given by Hodgson, who says it was due to the "numbers of incompetent men" who were appointed "as county superintendents in 1868" and were "either ignorant, dilatory, or unmindful of their plain duties." He points out also that when he came into office $145,783.49 of the regular appropriations for schools for 1868–69 and 1869–70 were still to be accounted for.

The assembly which met in November, 1870, being conservative in politics, appointed a commission "to examine into and report upon the affairs in the offices of the superintendent of public instruction, auditor, and State treasurer." They had no criticisms on the last two officers, but of the superintendent of public instruction they report that there was "want of any organized system of keeping the books" and that the books then used "had not been posted during the whole scholastic year." They found erasures in the accounts of one county and that in two others certificates had been allowed without sufficient proof that schools had been taught. Dr. Cloud was charged with paying out money "without due regard to the interest of the State," but the committee was impartial enough to say he had done this with the consent of the attorney general.

It appears that the new governor went beyond this mild criticism, for he refers to the report as showing—

> not only an unsatisfactory, but a most shameful and reprehensible state of things. The facts set forth by the commissioners are surely a stern condemnation of the management of our educational system during the past year.[1]

With the election of 1870, the accession to the superintendency of a Conservative, and the subsequent reorganization of the board of education, the reconstruction period in education practically comes to an end, although another reconstruction superintendent was in office in 1872–1874, and the machinery of administration was not changed till the adoption of the new constitution in 1875. What success did Conservatives have with the reconstruction machinery? A review of the next few years will give answer.

The first Conservative superintendent was Col. Joseph Hodgson, who succeeded to the office November 23, 1870, and served till September 30, 1872.

The law of November, 1870, restored a degree of self-government to the school organization by providing that in March, 1871, the counties should elect a county superintendent of education and two directors and that in April there should be elected in each township three trustees. This was a return toward the old order and was of service, since it made available the best men in the State.

Serious efforts were made to inaugurate economy in administrative expenses—possibly sometimes at the cost of efficiency; so that when compared with 1870 the cost of county superintendents was found to have been reduced from $57,776 to $34,259, and their expenses from $21,202 to $4,752. Thus in the matter of school disbursements the saving was $39,969.86. And when we consider the total administrative cost, we find it reduced from $86,123.82 in 1870 to $44,588.21 in 1871, or a saving of $41,535.61.[2]

Reforms were also urged in the manner of accounting, because it was found that $260,556.37 drawn from the treasury since July, 1868, was still unaccounted for by vouchers and that $211,217.79 in school warrants was unpaid.

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[1] Senate Journal, 1870, pp. 84–89.

[2] See Hodgson's report for 1871. Against this must be set the fact, however, that the school year 1870 extended from Oct. 1, 1869, to Jan. 1, 1871; the year 1871 from Jan. 1, 1871, to Oct. 1, 1871.

In reviewing the school fund due and available, Col. Hodgson showed that a total of $124,738.04 for the years 1868–69, 1869–70, and 1870–71 had not yet been certified to the local officers by the auditor; that $211,217.79 in school warrants was unpaid September 30, 1871; and that the school funds for 1871–72 called for $604,978.50, making a total of $940,934.33 then due from the treasury to the schools, an amount so large that "at the present rate of taxation the entire revenue of the State will probably not reach this sum." The superintendent adds that, as a result of these demands—

> at an early day in our scholastic year the treasury ceased cashing warrants in favor of county superintendents, and those officers were forced to raise money as best they could upon the State warrants, or to leave a portion of the claims of teachers unpaid.

As a relief for the teachers the superintendent suggested short-term bonds.

These strictures brought on a sharp clash between the State superintendent and the State auditor over the financial situation, as the former charged that the latter had been negligent in making up his estimate of educational expenses for the coming year. The latter, in his report for 1871, also discussed the situation and had his own explanation. According to the auditor, in 1871, the main trouble in administering the new law lay in the provision which allowed county superintendents to draw out of the State treasury in advance at the beginning of each quarter or at the beginning of the year all the money due the county.[1] It was used perhaps in the county by the superintendent or was kept in reserve until the end of the quarter, when it was paid out to teachers for services during the quarter. In this way it was liable to misuse and, if not misused, lay idle for the quarter, and so put the treasury to straits. Under the law the county superintendent might draw his whole year's apportionment in advance. Of this custom the auditor says:

> Sound policy would dictate that no moneys be drawn from the State treasury until earned in the various townships, and when drawn by county superintendents, it should be for direct transmission to the teachers by whom it was earned. No county superintendent should be allowed to retain thousands of dollars, belonging to the State for the use of schools, for a term of months, especially when the treasury became embarrassed by such action.

The apportionment for 1871 was $547,773.07, which produced a rate of $1.33⅓ per capita of the school population. This year there were enrolled 141,312 pupils, with an average attendance of 107,666, more than doubling that of 1870. There were 3,321 schools, including 253 classed as high schools; there were 3,470 teachers; the average pay was $42.60 per month, practically the same as in 1870; and the length of term was 66.5 days, an increase of 17.5 days over 1870. The two years, when compared, showed an increase of 17.25

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[1] This clause was repealed in January, 1871.

per cent in available funds; 106 per cent in average attendance; and 35.71 per cent in length of school term. These facts clearly prove that the change in administration was highly beneficial to the schools, that funds were more carefully and more economically administered, and that the people were taking a heartier and more general interest in the schools.

But while there was progress and interest, economy and enthusiasm, there were still lions in the way. Perhaps no clearer conception of the situation and of its difficulties as a whole can be had than may be gathered from extracts from county reports:

> The public generally are interested in the schools * * * 50 per cent better than last year. The people are very well pleased.—Baker County.
>
> We have made the public fund auxiliary only, and the patrons are required to pay the teacher the principal part of his salary. This we have been obliged to do in order to keep the schools in operation long enough to derive some benefits from them.—Blount County.
>
> Many of the children have to help their parents make crops, but are at school every spare day.—Lawrence County.
>
> The schedule of studies has been changed in a great measure for colored pupils. I found pupils in the colored schools studying geography and grammar who could not write at all.—Mobile County.
>
> The people are not satisfied with the present system; they wish it as it was before the war. There is too much reporting and trouble about it, as it is.—Shelby County.
>
> The attendance at schools is good in these neighborhoods that want and will have schools, regardless of the public fund, but in other neighborhoods they attend so long as the public fund lasts, and sometimes stop before the fund gives out, for fear they will have something to pay.—St. Clair County.
>
> Many people will not consent to pay anything to continue a school after the public fund is exhausted, and the consequence is the neighborhood is without a school, there being too few willing to pay to make up a school. * * * The colored teachers are poorly qualified. * * * Their patrons will not buy books and do not feel the importance of sending their children regularly to school. * * * In some townships the schools have been discontinued during the working season, and taken up again when crops are laid by, for those negroes who seem to appreciate education are working negroes and require their children to work also.—Talladega County.

These extracts clearly show that the schools were still bound down by political toils; teaching, which under Republican rule was considered highly discreditable, under Democratic administration became highly meritorious. We see also that many were still turning with longing eyes to the old decentralized type of school, but the extract from Lawrence perhaps gives the true key to the situation—the children were "at school every spare day"—education was as yet either an ornament or a luxury; it was not yet a necessity.

The superintendent points out another weakness of the State system as then administered, and shows that Alabama as a State was then—

> attempting to do more for public instruction than her means will justify and more in proportion to her population and resources than any of the older and more populous States of the North.

This was clearly because the State did all. The superintendent sought to correct the abuse by a more stringent collection of poll tax and suggested a "resort, if the people vote to do so, to local taxation by vote of taxpayers in each school district, as is done in other States." He urged that the pay of county school officers be shifted from State to county funds and that "each county shall provide for its public schools a sum equal to one-fourth or one-half of the State appropriation." It is evident that the superintendent dimly realized that one of the defects of the public-school system in Alabama was that the local units depended on the State for nearly or quite everything. Local initiative was entirely wanting, and the schools languished because they had not yet learned the lesson of self help—a situation which "forward-looking men" in Alabama have not even yet been able to remove.

So far had the doctrine of centralization taken root in the Democratic State of Alabama in 1871 that even the few local taxes levied under the permissive law had to pass through the hopper of State machinery before they could be used by the county levying them. They were collected and forwarded to the State treasury, then at considerable expense and trouble they were returned to the county where they originated. With the poll tax it was worse still, for this was not only sent to the State treasury, but was then prorated—an encouragement to both ambitious and indifferent counties to do less and less. Against these conditions both auditor and superintendent protested, and urged the repeal of laws so destructive to local initiative.

Another trouble which confronted the schools was the imperfection of the law; salaries were at the caprice of trustees, and when earned could not be promptly paid, even if the cash was in the treasury. Under the law as originally passed by the board of education the county superintendent might draw the whole of his apportionment during the first quarter, but this worked hardship with the treasury. This was complained against and was repealed by the assembly in January, 1871.[1] Then it was provided that the apportionment should be drawn only quarterly, and the following situation resulted: A teacher began his school, say, in January and finished in March; he could then draw only one-quarter of his salary, but for the remainder "must wait until the second, third, and fourth quarter roll around before he can be paid in full."[2] Against this situation the superintendent entered a vigorous protest, and it was remedied by act of December 14, 1871.

The State superintendent could, however, report progress. There was organized a State teachers' association; there were satisfactory teachers' institutes; the establishment of normal schools was recommended, and eight were provided for, four for each race; private assistance was again coming to the aid of the schools, and in this way the term was being lengthened; the schools were beginning to make an impression on the people; the improved laws and "the election of county superintendents of capacity and energy" were having the desired effects.

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[1] See report, 1871, p. 16.

[2] Report, 1871, p. 22.

Because of a change in the school year the official year 1871 embraced only the nine months between January 1 and October 1. The year 1871–72 extended from October 1, 1871, to September 30, 1872, and at its end Col. Hodgson retired. We have seen that the first year of his work was devoted mainly to straightening out the financial tangles into which the school funds had fallen, from lack of care on the part of officers and of cash in the treasury. With the opening of his second year there was improvement, yet there remained two or three depressing elements in school life of which the superintendent speaks:

> From unofficial reports of county superintendents I am informed that large amounts of warrants remain in their hands unpaid. It has been impossible, therefore, for county superintendents to balance their accounts with this office. * * * Much complaint is made by teachers of public schools that the treasurer is not able to pay their claims promptly. * * *. I would urge upon the general assembly * * * to order a sale of sufficient State bonds to liquidate every cent of the indebtedness to her public schools. I would urge that the proceeds from the sale of these bonds be kept apart in the treasury from all other moneys and be held inviolably for educational purposes. I would urge, furthermore, that when the State shall have paid up all school dues to the end of the present fiscal year the school revenue for every year thereafter shall be kept separate and distinct from all other funds, and, as the constitution commands, "shall be inviolably appropriated to educational purposes and no other purposes whatever." This section of the constitution has never yet been put into effect by law. * * *. The abolition of the board of education and the return of all legislative power respecting education to the hands of the general assembly would remove many difficulties which now embarrass the department, and would, in my opinion, meet the cordial approval of the intelligent people of the State. I am informed that but one State in the Union has ever had such an educational board as is provided for by our constitution.

As far as figures and numbers go, however, there was no reason for dissatisfaction with the year 1871–72. The school income was $607,060.97; the apportionment $553,067.65, or $1.36 per school capita, as against $1.33 in 1871, with $12,000 for normal schools. The school population was 403,735; the total enrollment 103,615, and the average attendance 81,157, with 22 counties not heard from, as against 141,312 and 107,666, respectively, for 1871. The salary of white teachers in 42 counties and in the city of Mobile was $38, and the length of term 72 days. For colored teachers in the same territory it was $40 and 71 days.

During these years educational legislation was left practically in the hands of the board of education by the legislature. The board was not slow to exercise its legislative functions; besides much routine legislation looking to the relief of individuals, there were acts fixing the salary of teachers, the limit being $60 per month, and requiring the township trustees to see that the school funds were so supplemented as to bring the term to five months; four normal schools for white teachers, with $4,500 available funds, and four for colored teachers, with $4,750, were provided. A normal school for white female teachers and a "central normal school" at the university were also provided, but the first and third of these acts were repealed by the legislature in February, 1872.

### III. SCHOOL LEGISLATION IN 1872, 1873, AND 1875.

The successor of Col. Hodgson was Col. Joseph H. Speed (1872–1874). The political pendulum had again favored the Republicans, and Col. Speed sought to make party capital by using the arguments of his Democratic opponents. He urged "that reform, retrenchment, economy" be "severely and rigidly enforced." He reviewed the educational experiences of the past:

> Every dollar of the public-school fund and the university fund given the State by the General Government has either been squandered or lost. Let us satisfy our tax-burdened people that every cent of their money shall be honestly, judiciously, and economically expended, and that all disbursing school officers shall be held to the severest account. * * * It has been represented * * * that many county superintendents of education are in default. * * * Those who have been unfaithful and dishonest (if such there be) in applying and using the money raised for the education of the *poor children* of our State should not go unpunished.

It was imperatively necessary, first of all, that the system get back to a business basis, and soon after Col. Speed's accession to office the board of education entered upon legislative activities which were far-reaching in their effect. These acts included the introduction of certain textbooks into the system, but teachers were at liberty to refuse to use any books which had not been adopted by the board; county superintendents were required to have an office at the county seat; city systems separate and distinct from other parts of the county school system were inaugurated for Selma, Opelika, Eufaula, and Birmingham; and a normal school for white male teachers was established at Florence.

The most important of these acts, however, grew out of the desperate financial straits to which the schools had now been reduced. There had been more schools and more teaching than the State could pay for, and to prevent a bad situation from becoming still worse the board passed an act on December 14, 1872, which ordered that after January 1, 1873, school officers—

> shall cause to be closed all the free public schools in their respective townships and counties, and shall employ no teacher in any public school in this State until said trustees shall be informed by the superintendent of public instruction that funds have been provided for the prompt payment of teachers.

This act was the most important part of the school legislation for the year. It was drastic and yet necessary to bring the schools back to a cash basis, for at the end of the year on September 30, 1872, there was due the school fund and still unpaid the sum of $317,575.35, and this amount was steadily increasing. This situation had been brought about by two causes. The custom had arisen in the days just after the war of borrowing the school funds to meet what seemed to be more pressing needs, and this misapplication of funds had not yet ceased. In the second place, there had arisen under the stress of public poverty the custom of issuing State warrants or certificates in anticipation of taxes. These warrants were made receivable for taxes and as such circulated as a sort of bastard currency and at more or less discount. In 1871–72 warrants amounting to nearly as much as a year's taxes were issued. They came back to the treasury the next year in payment of taxes, and the school administration faced the dilemma of either new warrants or bankruptcy. It was to meet this situation that the law of December 14, 1872, was passed, and as a result there were practically no public schools in Alabama January 1 to October 1, 1873, except such as were supported by local funds. The schools were thus the first to feel the effects of these financial troubles, and the principal work of the superintendent during that summer was to explain to his correspondents, to school officers and others, why there could be no public schools

The assembly, in order to stop the misapplication of school funds and to reestablish the schools, passed an act April 19, 1873, of far-reaching significance for the schools. This act required the county tax collector to pay the poll tax to the county treasurer, instead of the State treasurer. It required further that by December 10 of each year the State superintendent should announce the apportionment due each county, exclusive of poll tax and special tax, if any, and that 90 per cent of this sum should be paid by the county tax collector directly to the county treasurer. In this way the greater part of the school money was held in the county. The remaining 10 per cent was held in the State treasury for the benefit of the counties.[1]

Four days later (April 23), as if having ceased to hope for help at home, the assembly appointed a joint committee to memorialize Congress in behalf of the public schools. They were to ask for 3,000,000 acres of the public land still lying idle in the State and to pledge the faith of the State for the safe administration of the fund, the principal to be inviolate, the income only to be used. Nothing seems to have come out of this memorial.

It is evident that the radical changes inaugurated by the laws of December 14, 1872, and April 19, 1873, would upset entirely the school interests for the year 1872–73. There was set aside this year for school purposes the sum of $524,452.40, and there was issued in warrants during the first quarter $68,313.93, but—

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[1] Laws of 1872–73, p. 6.

> even for the limited extent to which schools have been taught during the last year, the treasury has not been in such condition as to enable teachers to draw the small amounts of money due them. The best that could be done was to have treasury warrants drawn in such way as would be most advantageous to these worthy claimants.

The office of education issued certificates upon which school warrants were drawn by the auditor. These were made payable to the county superintendent, who indorsed them and paid them out to such teachers as would receive them. Their acceptance was not legally compulsory, but was economically so, for it was this or nothing, and since the warrants could not be paid by the State, the teachers were forced to discount them at usurious rates. The effect of this upon the morale of the teachers can be easily seen.

To increase the value of the warrants the superintendent suggested that they be made to bear interest. In his official correspondence he emphatically denies that he had been a party to the custom of passing over the claims of teachers in favor of other creditors and in his published report says of the teachers:

> There is no class of State creditors more meritorious than the teachers of public schools; no claims against the State can be urged with stronger force than theirs. Indeed, there are many patent reasons why their dues should be entitled to precedence in payment, so long as the State is compelled to discriminate even temporarily between her creditors. The large amount due the schools, as above shown, has accumulated because the exigencies of the State have been such as to compel the use of the money to meet other demands.

In another part of his report (1873), he says:

> The financial depression experienced by all branches of the State Government for the last year has been specially embarrassing to the public school system. * * * To those at a distance * * * it is proper to observe that the difficulties are in no respect attributable to any act, either of commission or omission, on the part of the officials intrusted with the duty of administering the affairs of the State Government for the period mentioned.

It is clearly evident, moreover, that the board of education felt matters had now come to a standstill. They evidently doubted the sufficiency of the act of April 19, 1873, and in a memorial dated November 25, 1873, put the matter squarely before the assembly. They say:

> The want of money has crippled the educational department and led to the suspension of the free public schools throughout the State. This unfortunate condition has not resulted from unwise legislation on the part of the board of education, nor from incompetency or unfaithfulness in our school officials, but is chiefly due to the fact that no act has been passed to enforce section 10, article 11, of the constitution of the State of Alabama, which provides that certain revenue and other school funds therein named "shall be inviolably appropriated to educational purposes and to no other purpose whatever."

> Since the organization of the present school system in 1868 this provision of the constitution has been disregarded by each successive legislature. Your honorable bodies have been the first to carry it partially into effect. [By law of Apr. 19, 1873.]
>
> Each year an increasing percentage of the school fund has been diverted from its legitimate use to the defraying of the general expenses of the State, which compelled the board of education to close the schools for the want of money to pay teachers and officers.

The contention of the board was shown by the following figures given by them of sums apportioned, sums actually paid out for the schools, sums due but not paid to the schools at the end of the year, and the total sums still due.[1]

*Appropriations and expenditures for public schools, 1869–1874.*

| Years. | Apportionment for year. | Received for school purposes. | Balance due schools at end of year. | Total amount due. |
|---|---|---|---|---|
| 1869–70 | $500,407.18 | $306,872.99 | $193,724.19 | $187,872.40 |
| 1870–71 | 581,389.29 | 320,480.97 | 260,908.32 | 280,515.50 |
| 1871–72 | 604,978.50 | 166,303.29 | 438,675.21 | 417,165.40 |
| 1872–73 | 522,810.00 | 68,313.93 | 454,496.17 | 786,165.40 |
| 1873–74 | 474,346.52 | .............. | .............. | [1] 1,260,511.92 |

[1] Due Nov. 25, 1873.

The board felt under the necessity of defending itself for closing the schools by act of December 14, 1872. There was choice only between closing the schools and issuing more school warrants. The issue of more warrants would have depreciated still further the value of those already issued and seriously embarrassed the State.

They continued:

> Your memorialists would impress upon your honorable bodies that the State is more than two years in arrears to this school fund. The board of education is powerless to remedy the condition of the school finances. * * * Your memorialists would repeat that the present condition of the educational department is not the result of unwise legislation * * * nor of unfaithfulness or inefficiency of school officials, nor of the expensiveness of the administration of the school laws. There has not been a dollar, of which they are aware, lost by the default of any school officer since January 1, 1871. * * * This is as economical an administration of the educational department as can be found in any State. It seems hardly practicable to reduce expenses any further. No system probably can be devised which will pay teachers more than 94 per cent of the fund. The present school system will do this, and would have done it at any time during the past four years had the legislature provided for the prompt payment of the school money. It is for your honorable bodies to determine what relief you can afford.

For its part the legislature of 1873–74, to whom this memorial was addressed, seems to have done nothing beyond making a special appropriation of $170,688.85, "which is the amount of interest accruing on the sixteenth section funds," for as Col. Speed was continually pointing out to his correspondents during the summer of 1873, the suspension of the schools did not affect the income of the permanent school fund: "It is not suspended, but goes on accumulating without any reference to any interruption in the State's finances." It does not appear, however, that this appropriation was paid. State bonds could no longer be sold, and the sole dependence was on taxes. The act of December 17, 1873, forbidding tax collectors and all others engaged in collecting revenue from trading in any way in State warrants, State certificates, or other State securities is a sufficient indication of one difficulty which the school system had to face.

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[1] It will be noted that the treasurer's reports for these years show "larger amounts than here given disbursed for educational purposes; but the excess was used in paying indebtedness for previous years."

Col. Speed's statistics for 1873–74 are exceedingly scanty. In his report of November 10, 1873, he estimated that the poll tax to be retained in the counties amounted to $80,486.11, while the 90 per cent certified to the counties under the law of April 19, 1873, amounted to $352,673.92, making a total of $433,160.53 which the counties might count on as cash, since it was a first lien on the taxes of each county; but, as this was the first year of the law, its practical working proved—

> very unsatisfactory and embarrassing. It proved hard to make the county superintendents understand how the 90 per cent was drawn and still more difficult to have them conform to the conditions which the new system imposed.

In some counties the 90 per cent certified was more than was collectable, and the superintendent still felt it necessary to urge that—

> some plan may be matured and adopted by which our public school system will realize the benefits of the money that has become due to it by the regular laws of the State. * * * An experience of two years * * * has shown me more and more forcibly the almost absolute necessity of some fixed, known, and available dependence for the support of schools and teachers. Our schools need more energy * * *. Yet there is no more difficult task * * * than to break up the humdrum, listless, lifeless performance of school duties, which inevitably attends upon long delayed, incomplete, or uncertain payment of the teachers.

According to Col. Speed's report of September 30, 1874, the total available funds for the year 1873–74, exclusive of poll and special taxes, were $405,080.42; the total expenditure, $404,301.14. We have no way of explaining the difference between the figures given in this report and those of the earlier one. There were reported 233,333 white and 172,506 negro school children. There are no statistics of enrollment, attendance, schools, or teachers. It looks as if Fleming's sweeping charge (p. 633) was literally true:

> Practically all of the negro schools and many of the white ones were forced to close and the teachers, when paid at all by the State, were paid in depreciated State obligations.

This administration did not close without an official investigation "into the irregularities alleged." The committee made its report December 15, 1873, and showed up certain blameworthy shortcomings. The gist of its conclusion was that there was in the department "such a want of system in its general management as must necessarily keep it involved in inextricable confusion." [1]

Since with Col. Speed's administration reconstruction in the schools comes to an end, we may quote here the words of Leroy F. Box, later State superintendent, as to why the reconstruction system was "unpopular and therefore unsatisfactory." He says:

> Among these [causes] may be mentioned unwise legislation * * *. But it is probably true that the chief cause of the unpopularity of the system through all these years may be found in the fact that upon its reorganization after the war, our people were led to expect too much from it. Men whose interests were not identified with the people of Alabama * * * held out to our people the alluring but false hope that Alabama had at her command and disposal a magnificent school fund—a fund sufficient not only to maintain the schools annually throughout the entire year, but to build and equip schoolhouses and even to furnish lights and fuel for use in the schools. So rigid was the construction placed by these men upon the provisions of the State constitution of 1868 relating to the public school system, that it was held to be unlawful for parents or guardians of children attending the public schools to supplement the township funds. And * * * our people, stricken down as they were * * * listened for a time to the song of the siren.

With the awakening came a revulsion of feeling that home rule could not immediately dissipate.

Hon. John M. McKleroy, who succeeded Col. Speed in 1874 and served till 1876, shows a clear understanding and a sure grasp of his subject. Had he remained at the head of the schools, he might have developed into an educational statesman. During his administration the constitution of 1868 was superseded by that adopted in 1875, which more clearly represented the thoughts and feelings, the hopes and aspirations, of the people then in power in the State.

It is evident that for the year 1874–75 there was marked improvement. Says the superintendent:

> In all the counties, and in nearly every school district in the State, one or more schools have been in operation, and there are but few districts where schools for each race have not existed * * *. It is * * * believed that every person in the State, within the school age, has had the opportunity and privilege of attending the free public schools during the last scholastic year.

The enrollment for the year was 145,797 out of 406,270 children between 5 and 21, and while the enrollment was only 36 per cent of the school population we must recall that this was nearly 40,000 more than in any previous year. The school term for whites reached 90 days, at a cost of $3.09 for the term per pupil; for the negroes the term was 83 days, at a cost of $3.79 per pupil.

Says the superintendent:

> It will be readily observed that the tuition of these pupils in private schools would have been about seven times more than it has been under our free school system * * *. It is also the fact that our schools have been kept in operation during the past year much longer than during any previous year since the constitution of 1868 has been in force.

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[1] See Senate Journal, Nov. sess., 1873, pp. 245–252.

These improvements were attributed to (1) the adequate school fund for the year; (2) the availability of the fund when needed; (3) the wise laws for regulating the schools and disbursing the fund made by the board of education; (4) the efficiency of a majority of the county superintendents.

The school fund for 1874–75 was $565,042.94, including $73,555.30 of poll tax levied, collected, and retained in the counties. There was disbursed in all during the year $562,437.50, including the poll tax mentioned above and the $10,000 appropriated to normal schools.

.In writing of the school fund as "adequate," the superintendent emphasizes the fact that it was adequate only—

> to accomplish the great good which the reports show has been wrought by means of the schools. And it is proper to state that this result even has not been attained with the money appropriated by the State alone, for it will appear further on that the patrons of the schools have, in many instances, supplemented the public funds. * * * There are in the State 1,696 school districts. * * * In each of these districts there must be at least one school for each race, and in many of them more than one school for each race is required to accommodate all the children. * * * The whole fund of last year was only $1.39 per capita of the school population, and only $3.875 per capita of those enrolled in the schools. * * * The fund for the past year has been almost the same as the average appropriations for the preceding years since 1868; and if more has been accomplished with it than heretofore, it is due to the last three causes mentioned above. The principal of these is that money has been available when needed. I doubt not that the chief embarrassments of former administrations have been owing to the fact that when the schools were taught, and the money became due to the teachers, it could not be had. Previous to the enactment of the law of April 19, 1873, by the general assembly, "To keep in each county in this State a proportionate share of the public school money," all the revenues of the State were paid into the State treasury by the collectors, and the money appropriated by the constitution and laws for educational purposes was not set apart and devoted to such purposes, but was used indiscriminately for any and all State expenditures. The consequence was that in almost every instance the money was not in the treasury when wanted, and poorly paid teachers had to accept warrants on the treasury, or nothing, for their services. They were then compelled to sell these warrants to speculators at ruinous discounts to procure the ordinary necessaries of life. Is it surprising that under such circumstances the school system should have been decried, and the administration of it should have been regarded with disfavor? No wonder that the people were ready to believe that a school system which seemingly absorbed so much of the State revenue and from which so little benefit was derived was worthless. No wonder that they began to contemplate seriously the propriety of an entire abolition of the system. * * * The passage of the act of April 19, 1873, was the beginning of a most salutary change to the school system. * * * thus the [school] fund was exempted from the habitual misapplication.[1]

The law of April 19, 1873, was revised and amended by act of March 19, 1875, so that all poll and special taxes remained in the county where levied and collected; the State superintendent made the apportionment on October 10, instead of December 10, and the 90 per cent was now paid to the county superintendent, who became custodian of the county school fund, instead of the county treasurer. The remainder of the fund due the county was apportioned January 1, and was set aside by the State treasurer for the use of the county schools only.

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[1] Report, 1874-75, pp. 6-11.

Moving forward the dates of apportionment seemed to help the county tax collector in making payment and the county superintendent in apportioning funds to the districts. It helped forward also decentralization; the whole of the poll and special tax and 90 per cent of the general apportionment now became a purely county fund and so was "exempted from the habitual misapplication," by either State or county treasurer, for it sometimes happened when the latter was custodian of the school funds "that the warrants of the county superintendents to teachers were not promptly paid on presentation as they should have been."

This new arrangement went back to the law of 1856, which had been in force till after the organization of the schools in 1868. As a further amendment of the law the superintendent strongly urged that the whole sum apportioned to the county be certified and not 90 per cent, for—

> the whole amount of the school fund is known before the apportionment is made, and the exact amount which each county will be entitled to is known as soon as the apportionment is made.

The superintendent wrote encouragingly of the influence and effects of the laws of the board—

> regulating the schools and the disbursement of the funds.[1] The principal improvements are those which restrain trustees from making contracts for or opening schools until after they have received notice of the amount to which their township, and each race therein, will be entitled for the year, prohibiting the establishment of more than one school for each $100 apportioned to the particular race in the township, unless the fund is supplemented by the patrons so as to provide at least $100 for each school; compelling all schools to which as much as $100 is appropriated to be kept in operation for at least 20 weeks.

Schools which had less than $100 were to last 12 weeks, and teachers were to be paid monthly under penalty.

The superintendent says:

> This provision has caused many patrons who desired to have schools in their immediate neighborhoods to supplement the public fund, and thus to multiply the schools. In fact in almost every county in the State, the fund for white schools has been, to some extent, supplemented by the patrons. * * * This compulsory term of five months has also prevented the public schools from being degraded into mere summer schools, taught in the vacation season of private schools, and with a view principally to absorb the public fund, and avoid the competition with those schools. * * * Even now, in some of our cities the graded public schools are considered the best therein; and those cities where such schools have been in operation for some years, I am satisfied, could not be induced to abolish them, even if they should be compelled to sustain them solely by municipal taxation.

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[1] See board of education law of Dec. 10, 1874.

But Supt. McKleroy was not without his troubles, and the line of attack was the same as in earlier days—the county superintendency. The reason was also the hoary one which had done service in ante bellum days—economy in administration. This reason has done service in States other than Alabama; and the arguments used to meet the attack are the same as those of other days, abundantly reinforced by citations from the experience and arguments of earlier superintendents, from the days of Perry to those of Speed. Against the investment of money in the public schools themselves there was no outcry, but the idea seems to have been that the system should have been self-executing, and that little or nothing should have been expended for the administration of the law. Even the poor salary of the clerk in the office of the State superintendent and that of the superintendent himself were seemingly begrudged, while all sorts of schemes were proposed by which the work of the county superintendents might be performed without cost to the State. It is strange that people who were accustomed to pay for superintendence in business affairs were so slow to place education on as high a plane. One argument against county superintendents was that they were incompetent. To this the superintendent replied:

> A prime difficulty in securing competent county superintendents in all the counties arises from the fact that the compensation of these offices, as now fixed by law, is so small. It is not enough to enable them to devote their whole time and attention to the office, and they must therefore, from necessity, pursue other vocations as well.

The average salary of county superintendents in 1874–75 was only $436.96 and the total amount expended during the year for this work was $30,587.28. Individual salaries had ranged in 1870 from $2,000 per year in Dallas, Mobile, and Montgomery, down to $437.50 in Covington. In 1871, after the Conservatives came into power, these salaries were revised downward and varied from $1,674.21 in Mobile to $300 in Baldwin and seven other counties. In 1874–75 the highest superintendent's salary was $2,810.75, in Mobile; the lowest, $300.

There were three normal schools in successful operation for the year, one for white teachers and two for colored. They were each well attended and were doing good work.

The apportioned fund for the year was $549,814.09; the school population was 406,270; the enrollment, 145,797; the average length of the term was 86 days; the number of teachers, 3,961; the average pay per month was $27.20 and the average cost per pupil per month was 83 cents.

It would appear then that during the year 1874–75 the schools were fast getting on their feet again; they were finding themselves in a financial sense, and this was helping them rapidly forward.

In January and March, 1875, the general assembly had felt it necessary to provide against embezzlement of school funds and to require, under severe penalty, that tax collectors pay to the county superintendent "the identical money, currency, or obligation received by them for taxes from the taxpayers." The purpose of these acts was plainly to prevent thrifty and unscrupulous collectors from paying over to the school funds bad money in place of the good money received by them. Under this law it was no longer possible for collectors to speculate to the disadvantage of the teacher.

Another law passed March 8, 1875, was not so favorable. This revised the code and cut the rate of interest on the sixteenth section funds from 8 per cent to 4 per cent, while that on the surplus revenue was not mentioned. The result was that, while the school had received more than $200,000 from these three sources in 1874–75, they would receive in 1875–76 only $73,663.35.[1] It was explained that since the State under the constitution was already giving one-fifth of her income to the schools, the old rate of interest made it undertake more than it could well perform. This was blow number one.

Blow number two was still more severe. The new constitution was adopted on December 6, 1875, two months after the beginning of the school year, and after the regular fall apportionment had been made to the counties. This new constitution abandoned the one-fifth requirement for the schools, and, under the interpretation of the attorney general and against the protest of the State superintendent, this was declared retroactive for the year 1875–76.

In this way the act of March 8 and the new constitution gave a heavy setback to the schools. In 1874–75 their income had been $565,042.94. In 1875–76 it was only $351,496.64, made up as follows:

| | |
|---|---|
| From sixteenth section funds, at 4 per cent | $69,779.70 |
| From valueless sixteenth section funds, at 4 per cent | 3,883.65 |
| From surplus revenue funds, at 4 per cent | 26,763.47 |
| From special appropriation under the new constitution | 150,000.00 |
| From poll tax | 96,414.39 |
| From miscellanies, balance, etc | 4,655.43 |
| Total | 351,496.64 |

Of this sum there was apportioned to the schools $337,276.33; $8,000 went to the normal schools, while $6,150, including the expenses of the superintendent's office, went for miscellanies.

The reports for the year were very imperfect; only 51 counties were heard from. In these 51 counties there were 3,088 schools in 1875–76, as against 3,211 for the previous year; there were 104,414 children enrolled, as against 118,252; and the length of the school term was 80 days as against 86 days. Further than this, there was long delay in securing the $150,000 direct appropriation provided under the new constitution, and some of the schools were not started till the spring; but notwithstanding all of these disadvantages the gratifying fact developed that—

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[1] See report 1874–75, p. 41. The law of Mar. 8, 1875, provides no interest on the Surplus Revenue fund of 1836, but this was restored by the constitution of the same year.

> the result of the last year's operations, as compared with those of the previous year, are not proportionate to the diminution of the fund * * * the system during the past year has been even more useful and beneficial to the State than could reasonably have been anticipated in view of the decreased school fund and the late period in the year before it became available and the schools could be opened.

To the delay in opening the schools was charged the falling off in enrollment, but this in turn—

> at least prevented the origination and accumulation of claims against the school fund which in former years so disaffected and discouraged teachers and made the system unpopular generally.

The superintendent urged a closer collection of poll tax and that each school district be required to levy and collect "a special tax, within proper maximum and minimum limits, for the maintenance of its own schools." The matter of the county superintendents was still an open one. The term of office of all was terminated by law on the first Monday in August, 1876; then the salaries were reduced and the term of office extended to January 1, 1877.

> The injurious effects of these enactments are already perceptible. Hardly any teachers' institutes or conventions have been organized or held during the year, and the county superintendents, by reason of their inadequate compensation and uncertain tenure of office, have almost invariably suspended visitation of the schools. Several * * * have resigned, and others have only been induced to hold on to await the action of the general assembly on the subject.

A fairly accurate picture of the schools in 1874–75 may be secured from the reports of the county superintendents. From these it is evident that they were gaining in popularity and were strengthening their hold on popular favor, but it was still thought that too much of the public money was going for superintendence and administration—a feeling which came near being disastrous in 1876. Schoolhouses were still very inferior; most of them were private property, with little or no furniture. The public was either unwilling or unable to build houses, and instead borrowed the use of churches, discarded log houses, or school buildings erected by private enterprise. In some sections attendance was still poor, due to indifference rather than hostility, and among the negroes to frequent changes of residence. The county schools were numerous, and frequently had fewer pupils than they could accommodate, because of local jealousies and the desire of every man to have a school at his own door. The same spirit prompted trustees to start rural schools within walking distance of each other and to use each a few months rather than consolidate and run one for double the time. The principle of social solidarity had not developed; each community was sufficient in itself and generally a law unto itself; few were willing to increase the length of term by a levy of taxes or by voluntary subscriptions.

But notwithstanding all these adverse conditions the schools were gaining in strength and influence. The people of Alabama had never been opposed to the system per se. In ante bellum days they may have been indifferent, but this feeling was melting before the rays of knowledge. They opposed those who took over the system in 1868, but when they again secured control of the State government they did not overthrow the work of the former régime; they did, however, change the direction of its energies; they extended its scope, welcomed it as an ally, and sent their best citizens even into the negro schools, which a few years earlier would have meant social ostracism.[1] They were still troubled with the debts created in earlier years, by a depreciated State currency, and by a lack of cash. Teachers still had to discount their warrants, in some cases as much as 50 per cent, but the finances of the State rapidly improved under the administration of the Conservatives, and not only did they increase enrollment, attendance, length of school term, and number of teachers, but in 1875 they had established one normal school for whites with an income of $5,000 and two for negroes with the same income.

A just estimate of the work of the people of the State for the years between November, 1870, and December, 1875, compels the fair-minded critic to say that while the amount devoted to education was small, it was perhaps as much as the people could be expected to give. It should be remembered also that progress in education can never come from the fiat of a man at the top, but must be an evolution that carries the people with it.

The schools of Alabama were never out of the hands of natives as completely as were those of some other Southern States. The constitution of 1868 introduced some foreign elements and ideas, but every change tended back toward the ante bellum norm, and it seems correct to say that the Alabama system of public education has grown out of the actual experiences of the people of the State.

The administration of Supt. McKleroy may be characterized as a period of intense shock; had not the schools been in the hands of some of the best people, they would hardly have stood the strain. As it was, the superintendent was able to hold the schools steady. No progress could be expected in the face of such loss of income as the schools suffered in 1875, but there was much less loss of prestige than might have been expected, and as a result, after the force of the financial loss was spent, after the political problems of reconstruction were settled, after the schools had been again able to find themselves, they were ready to enter upon an untrammeled course of development.

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[1] Superintendent's report, 1874-75, p. 105.

Supt. McKleroy, in his final report, dated November 9, 1876, summarizing the situation for the two years of his administration, says:

> In that period great advancement and improvement has been made. The principle of the power and propriety of a State to maintain a system of free public education has been affirmed in unmistakable terms by the people of this State, and they have implanted it in the constitution made by themselves, and in the same instrument they have made liberal provisions for its support, thus guaranteeing its permanency and usefulness.

And this statement, with many confessions of weakness, with many caveats and supplementary pleadings, may briefly characterize the educational history of this State during the period that tried men's souls as by fire.

# Chapter IX.

## REORGANIZATION AND ADVANCE, 1876–1898.

### I. CONSTITUTION OF 1875.

The new constitution of Alabama, formed by convention September 6 to October 2, 1875, ratified by popular vote November 16, going into operation December 6, 1875, represents the reaction from reconstruction. It was the culmination of an eight-year struggle for self-government which had absorbed the greater part of the life and public energies of the State. If little was accomplished during this period in the way of educational progress it was because all energies were absorbed in the greater question of political autonomy. What was education to men struggling for political existence? What was education without liberty?

The question of the autonomy of the South had been settled by 1875, and the constitution of that year may therefore be taken to represent the ideas of the native population on education. The careful student will recognize at once the close relationship of the educational provisions of the constitution of 1875, and the laws based on it, to those in force prior to 1861. The constitution of 1868 and the reconstructionists did little for education in Alabama. There is no ground for the claim that reconstruction or the Freedman's Bureau founded (or even substantially advanced) the cause of public education in that State.[1]

Article 12 of the constitution of 1875 deals with education. The marked change from the constitution of 1868 was the disappearance of the State board of education. That anomalous board had long been doomed. It now disappeared.

In other respects there was little radical change. The new constitution provided that the assembly "shall establish, organize, and maintain a system of public schools" with an age limit of 7 to 21 years; coeducation of the races, although no longer possible, was formally guarded against by the requirement of separate schools for "the children of citizens of African descent"; the old fiction of the perpetual fund was still maintained, and interest on the sixteenth section and surplus revenue funds was ordered paid. Nothing is said of the valueless sixteenth section fund, but by interpretation this was counted as a part of the sixteenth section fund. The assembly was to provide for an annual poll tax of $1.50, which was to be used for "public schools in the counties in which it is levied and collected"[1]; the assembly was to provide annually, "by taxation or otherwise," not less than $100,000 for public schools, and this sum was to be increased "as the conditions of the treasury and the resources of the State will admit."

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[1] See DuBois, in Atlantic Monthly, March, 1901.

The wasting of public money was guarded against by a provision that not more than 4 per cent of "all moneys raised" or "appropriated for the support of public schools" should be expended otherwise than for the payment of teachers. A State superintendent was to be elected by the people; no public money could go for sectarian schools; the university and the A. and M. College were put each under its own board of trustees, who were appointed by the governor. The independence of the Mobile County system of schools was recognized, and there was added a clause which was to be the entering wedge for the broader system which has not yet materialized in the State—

> and all special incomes and powers of taxation as now authorized by law for the benefit of public schools in said county [of Mobile] shall remain undisturbed until otherwise provided by the general assembly.

The income under the Constitution, when arranged by its sources, was as follows:

From the State:
1. Lands from United States, income only to be used.
2. Gifts from individuals or State and escheats, the principal might be used.
3. Surplus revenue, sixteenth section and valueless sixteenth section funds (paper funds), income to be used; rate of interest fixed by the assembly.
4. $100,000 or more appropriated by the assembly.

From the county:
1. Poll tax of $1.50 per poll.

There was no other suggestion of local tax, nor was it possible to levy such tax,[2] save in Mobile County, which became for that reason, the cynosure of all progressive eyes. Not until the constitution of 1901 was it possible for the counties to levy directly a 10-cent tax (1 mill) for the benefit of schools, and then only by a three-fifths vote.

Yet, it would be an error to assume that the educational provisions of the new constitution were everywhere regarded as indicative of progress. Says James Somerville, superintendent of Pickens County:

> The most of our people regret the necessity that the legislature * * * felt of diminishing the interest on the sixteenth section fund one-half. They also regret the

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[1] The reports of the auditor show that for year after year the poll tax was poorly collected. The errors and insolvencies were often 50 per cent of the total amount received; in some cases they were actually more than the whole.

[2] Attention is called to the act of 1899 levying a general tax of 10 cents for schools, considered in Chapter X.

necessity that the late convention * * * felt of adopting the articles on education; * * * whatever may have been the necessity of this retrograde movement in the course of public education, it is deeply to be regretted by all. To educate the people should be among the highest aims of a free State that desires to continue free.

## II. THE SCHOOL CODES OF 1877 AND 1879.

Such were the provisions of the constitution of 1875, which went into effect after the beginning of the school year 1875–76. We have already discussed the effects of the interpretation of this constitution on the school income for that year. By the beginning of the year 1876–77 the schools had somewhat readjusted themselves.

Then came the general school law of February 8, 1877, which went into effect October 1, 1877. This law, in general, was not unlike earlier educational acts; the rate of interest on the sixteenth section and valueless sixteenth-section funds was fixed at 6 per cent and on the surplus revenue at 4 per cent; other annual rents, incomes, profits, sales, and escheats went to the general fund. The contribution by the State was fixed at $130,000.

The officers of the system were a State superintendent, county superintendents, and three trustees in each township or school district. The State superintendent was elected for two years. He was an advisory officer with little opportunity for supervision. His duties included the apportionment of school funds "to the respective townships or school districts." In the matter of sixteenth-section funds, the principle of distribution first inaugurated by Gen. Perry in 1854 was again made part of the law.

> The superintendent of education shall first set apart to each township or other school district the amount due from the State to each district as interest on its sixteenth-section fund or other trust fund held by the State, and all townships or school districts which have an income from trust funds in the hands of the State, or from lease or sale of their sixteenth-section lands, shall not receive anything out of the balance of the educational fund to be apportioned until all other townships or school districts having no trust fund, shall have received from the general fund such sum as will give them an equal per capita apportionment with the townships or districts having such trusts and income.

It will be seen that by this arrangement the sixteenth-section funds were substituted by a per capita distribution; the district which had sold its lands to advantage did not receive much more, and the district which had wasted its lands did not receive much less. The capital from which this sixteenth-section income was derived was paper only.

The county superintendent was appointed by the State superintendent. His duties were mainly financial and not supervisory in character. He was the treasurer of the county school funds, paid all teachers, made settlements with the tax collectors, made reports to the State superintendent, and kept an office at the county seat one day in each month. His pay was $75 per year and 1 per cent of his disbursements; this might be forfeited by failure to make reports.

The three local trustees were a law unto themselves; they sold or leased school lands, established schools, hired teachers, visited schools, took the school census, from the reports of the teachers certified "how much is due each scholar for actual attendance," and then drew their warrant on the county superintendent "in favor of each teacher * * * for amount due him on his annual report." As pay for their high-class, exacting, and important duties, they were relieved from road and jury duty.

It was provided that the whole of the amount apportioned to the county by the State superintendent should be certified by the auditor on October 10 and paid by the county tax collector to the county superintendent. If the amount of school money thus certified was more than could be collected in the county, the remainder was paid out of the State treasury. It was also provided that funds raised by local taxation should be expended in the district where raised, and, finally, this law did not apply to cities and towns "which are provided for by local school laws." All expenses other than those for teachers could not exceed 4 per cent of the whole; the poll tax and the whole of the county apportionment was collected and spent in the county of its origin. The actual money was handled only by the county superintendent. The teachers were paid on the basis of attendance. The minimum attendance was rigidly fixed by law at 10 pupils, and the length of term at 3 months, or 60 days.

The tendency to create special school districts which developed during these years will be discussed later. The law of 1877 was superseded by a new codification enacted February 7, 1879. In most respects it is similar to the law of 1877, except that the school revenue is made to include income from unsold lands and license taxes. The county superintendent is still a financial or disbursing officer, and his pay is increased from 1 per cent to 2 per cent; the board of township or school district trustees is decreased from 3 persons to 1. His duties are essentially the same, but under the new law he was not to contract—

> to pay a teacher more per month than one-third of the amount of the district fund set apart for the school to be taught by such teacher, nor shall he contract for a school of less than three scholastic months, nor less than 10 pupils.

Nothing was said in the new law about attendance as a basis of pay, but reports were more rigidly insisted on under penalty of loss of salary which otherwise would be paid quarterly. A new feature in the law was the county educational board, consisting of the county superintendent and two teachers of the county. They were a county examining and licensing board and were required to organize and maintain at least three teachers' institutes during the year. The teachers were required to attend at least one, and the board contributed its services. Public examinations were to be held in the school every year, and there were the elements of a graded system. The law provided further that all poll and local taxes should be expended in the school district by the race which paid them.

This is the last general revision of the school laws of Alabama until 1895, and with this review an examination may be made of what was accomplished during the first years of the restored native administration. Since the adoption of the constitution of 1875 and the readjustment which immediately followed, the history of the Alabama schools has been uneventful. Yet it presents an interesting story of a struggle against poverty that prevented and conservatism that delayed the progress most ardently longed for and worked for by leaders whose duty it was to guide a people toiling upward through the night toward the light of universal education.

The successor of John M. McKleroy was Leroy F. Box, a lawyer of attainments, who later rose to a seat on the State circuit court bench. His administration covers the four years 1876–1880. He published three annual reports, no report being issued for 1876–77, although the statistics for that year are included in the report for the next.

The feature of most importance during these years was, perhaps, the general school laws enacted in 1877 and 1879. It required some time and effort for the schools to readjust themselves to the changes then inaugurated, but with this exception there was no violent interruption during the period.

The superintendent took particular pride in emphasizing the lowness of cost in the schools. This was only 57 cents per pupil per month, or $2.45 per term of 84⅔ days in 1877–78. He emphasized this "cheapness of instruction and economy of supervision" as commendable features of the school system. He pointed out that in these respects Alabama surpassed all the other Southern States, and by the same token he might have said that here Alabama led the Union. His argument proved too much.

There is in this period, beyond a doubt, a tendency to increase the general efficiency of the system. The number of teachers increased, as did the total enrollment and average attendance. After 1877–78 there was a marked movement to reduce the number of schools and increase the number of pupils, although the length of the general school term was around four months, and there was only the natural increase in the revenue, based mostly on the closer collection of poll taxes. Some efforts were also made to realize on the old sixteenth-section land notes which were still in existence, some of them going back to 1837. By compromising some few thousand dollars were realized, and a very favorable sign was that in 1879–80 public funds were being supplemented by private contributions to the extent of $60,145.

It would appear that the greatest difficulty in the way of public school progress was too much content. Says the superintendent at the close of his term of office:

> Our present school system is, in the main, a good one and will compare favorably with the systems of other States. It is reasonably adapted to the wants of the people, so far as it is practicable to adapt it to the present small appropriation for schools. Yet the system can be improved.

But unfortunately no Southern State with which comparisons are here indicated had more than the tentative beginnings of a system, and such comparisons served only to lull the ambitious into a false contentment.

### III. PROGRESS IN THE EIGHTIES.

Judge Box was succeeded in 1880 by Hon. Henry Clay Armstrong, who served as State superintendent from 1880 to 1884. Perhaps the most important act concerning the schools in 1880–81 was the one giving the county superintendents full power to compromise the old sixteenth-section land notes. In this respect fair success was attained and a total of $41,529.72 was turned into the permanent fund. The custom had been in earlier years to use this income for general expenses; the law of March 1, 1881, required it to be invested in Alabama 6 per cent bonds, but not till 1882–83 was the law obeyed. In that year also the State contribution to the school fund was increased from $130,000 to $230,000 per annum, and the effect of this increase soon made itself apparent.

The superintendent advised against sudden or radical changes in the school law, and none were enacted. He urged constantly the ever-increasing and more pressing need of money. At the end of the period the State was spending some 40 per cent of its total income for public schools; but the constitution forbade that more than 4 per cent of the total school fund should be used for any purpose other than teachers; and therefore school sites, schoolhouses, and school furniture suffered, and the county superintendents were miserably underpaid. The superintendent recommended a special tax of 5 mills, although evidently unconstitutional, to be devoted in part to material equipment, and asked that the pay of county superintendents be increased to $100 and 4 per cent of their disbursements, instead of $100 and 2 per cent. There was also a marked tendency toward centralization, for both superintendent and governor recommended that the county law of April 19, 1873, be repealed and that all funds be again gathered into and distributed from the State treasury. Certainly the main reason which caused the enactment of the law—the fear of misapplication of these funds—no longer existed. Two new normal schools for white teachers were established—those at

Jacksonville and Livingston—and the rating on teachers' certificates was made more close and accurate. The cost of the schools per pupil was only about 60 cents per month; the school term still hovered around four months; and the total yearly salary of teachers was less than $100, although this small stipend was somewhat augmented by private contributions and subscriptions among the whites and to a very small extent among the negroes.

The extra contribution of $100,000 first made by the State in 1883–84 was felt that year in an increase of 15,000 in enrollment and of 7,000 in average attendance, with nearly 400 new schools and the same number of teachers, but since the length of term went up only three days and the salary of teachers only $2 per month, we may assume that the extra $100,000 went mainly for schools and teachers for those who had been without them. This will account for the increased attendance and shows that the former superintendent was right when he said, "Our greatest need is more money." But the assembly was slow to rise to a real appreciation of this need.

Mr. Armstrong was succeeded as superintendent in 1884 by Hon. Solomon Palmer, who was the only one of the post bellum superintendents to break through the four-year rule of service. He served for six years, and during his term of office the schools enjoyed a fair degree of progress, the matters of preeminent importance being money and teacher training.

The system "is now regarded as essential to the prosperity of the State," said Mr. Palmer when he took office. This was true, and yet it was true only in the sense that there was no longer hostility to the schools. But the schools still encountered indifference on the part of the ruling classes, who believed that a great system could be developed with totally inadequate resources and an indifference on the part of the lower classes, who neglected to make use of the advantages offered. What impression on the mass of ignorant and indifferent illiterates could schools make that ran for three months in the year, with only 55 per cent of the children enrolled, with an average attendance of 33 per cent, with $20 to $22 as the average pay of the teachers per month, and with only 50 to 60 cents available per school child per month? It was, indeed, a disheartening prospect, and brave were the men who were willing to bear the burden of the public school system.

The main trouble was well known, and yet the educational authorities hesitated to speak freely. There was, however, at least one teacher in the State who analyzed the situation, and whether inspired or not, was bold enough to state the symptoms and prescribe the remedy.

J. N. Slaughter, of Rockford, Ala., speaking before the Alabama Educational Association in 1885, protested against selecting "State and county superintendents from among lawyers and politicians," and writing in the Alabama Teachers' Journal, for January, 1886, said:

> There have been absolutely free schools in the reach of the people in Alabama for 31 years with only short intervals, and yet illiteracy is on the increase among the whites at the rate of 2.5 times faster than the population. The free school is at their doors, and yet they do not enter. Place a schoolhouse at the door of each of those 30,000 of illiterate householders, with free tuition and option to send, and but a small per cent of increase would be enrolled, and few of these would learn to read. * * * There is a remedy. Change the constitutional age from the present limit to 5 to 15 years. *Make attendance from 7 to 9 and from 13 to 15 years compulsory for four months in the year.* Establish regular normal institutes in each county and make attendance at these institutes compulsory.

It may be objected that Mr. Slaughter's history was not accurate, nor his statistics exact. Such objections may be granted, yet the statistics of enrollment and attendance show that he was not wide of the mark. As for his remedy—the time for that was not yet.

The first, greatest, and most insistent demand of Maj. Palmer and his supporters was for more money. During the six years of his administration the State appropriation for schools rose from $230,000 in 1884–85 to $350,000 in 1889–90; the poll tax, by reason of greater care in collecting, increased from $138,000 to $150,000. The total increase was from about $511,000 to about $850,000, but on the other hand, school population increased from 420,413 to 522,691; so the per capita increase was only from $1.22 to $1.63. The authorities even did not appreciate the situation, for while the superintendent was pleading eloquently for a larger share of the surplus piling up in the treasury, the treasurer was recommending that the general tax rate should be reduced by 10 per cent.

The State was then expending about one-third of its income on schools, but this sum was clearly insufficient, and there seemed little hope of substantial increase. The amount from the State depended on the will of the assembly as well as the condition of the treasury; the income from the perpetual fund was fixed by law; the income from poll tax was greatly reduced by poor collections, especially among the negroes; and what might have been the fruitful source of local taxation was so hedged about by constitutional limitations as to be of little value.

The Alabama Educational Association was already discussing and advocating local taxation and the authorities were still seeking to equalize to all of the counties the sums derived by the richer ones from sixteenth section funds. The interest now paid on these funds was 4 per cent, and the difference between counties which had large funds and those which had small funds was as usual equalized out of State taxes.

It will be recalled that the city of Mobile had been organized as a special or separate school district as early as 1826; that under the constitution of 1875 it was placed in a class by itself and all of its "special incomes and powers of taxation" recognized and affirmed until changed by the assembly; that this power of local taxation for schools given to Mobile by the constitution of 1875 was apparently given to no other. But other local systems were from time to time also provided by law for Montgomery, Selma, Huntsville, Eufaula, Birmingham, Opelika, Dadeville, Oxmoor, and Marion. These acts produced little more than convenience in administration. They established school districts with boundaries coterminous with those of the municipalities. Their school income was their pro rata share of county funds, increased perhaps by appropriations from general municipal funds. In only one case was authority given to levy a tax. The act creating the school district of Oxmoor (passed Feb. 9, 1877) provides:

> The trustees, and their successors in office, shall have the power to levy a tax on all property, both real and personal, within the bounds of such school district not to exceed half of 1 per cent for school purposes; and for the first and second years, half of 1 per cent for building purposes.[1]

There was little of this special school legislation in 1879 and 1881. In 1883 various acts of the kind were passed, some with, some without, the power of local taxation. Among the former were acts incorporating the Peabody district in Russell County, and Decatur district, each of which was empowered to levy a 5-mill tax, and in addition Decatur might "for the first and second years" levy "one-half of 1 per cent for building purposes." In 1885 Blountsville, Prattville, and Cullman were authorized to levy 5 mills, reduced in 1887 in case of Cullman to 2.5 mills, and Tuscaloosa 2.5 mills; in 1887 Opelika and Uniontown were permitted to levy 5 mills; Troy and Tuscaloosa, 2.5 mills; Birmingham, 1.5 mills.

The unconstitutionality of these acts is so manifest that it would seem they were intended to force an issue in the courts. Such an issue soon came. The authorities of Cullman levied the tax. There was objection, and the case reached the supreme court as Shultes *v.* Eberly, and was decided against the power to tax. The question at issue, as considered by the judges, was "whether, under the State constitution, it is competent for the legislature to delegate to the trustees the power to tax." The court then proceeds to limit the question at issue by saying:

> We have thus limited the question, as we do not wish what may be said to be understood as applicable to school districts created within the corporate limits of a municipal corporation, where the power to tax resides in the municipal authorities, and is not in excess of the constitutional limitation.

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[1] See School Laws, 1878, p. 46; reenacted in 1887, Laws of 1886–87, p. 1031.

The court declared that municipal corporations, including counties, are the only corporations under the constitution to whom the assembly may delegate its powers to tax; as this separate school district was in no sense a municipal corporation the act was unconstitutional.[1]

By the same token it would appear that the cities might levy school taxes, and that the acts passed in 1887 and earlier for incorporated towns were constitutional. Nevertheless the attempt to avail themselves of this interpretation met with disaster. Under a law passed February 18, 1895, the city of Birmingham attempted to collect a special tax for schools. It was already collecting a municipal tax of 50 cents on the hundred, which was the constitutional limit, and for this reason the law provided that the school tax should be levied "on the same lists with other State taxes," and it was provided further—

> that whenever the tax levied by the State shall exceed 55 cents on every $100 of taxable property, then the tax hereby levied shall be diminished to that rate which, added to the rate levied by the State, shall not exceed 75 cents on every $100 worth of taxable property, the limit fixed by the constitution [for State taxation].[2]

Stripped of verbiage this act simply meant that the city of Birmingham, having already levied the 50 cents per hundred allowed for municipal taxation and desiring to raise more money for schools, undertook to shift this extra tax from the city to the State lists.

Says the supreme court decision:

> It was supposed * * * that this constitutional inhibition might be legally avoided by providing that the State should levy and collect the tax and pay the same over to the treasurer of the board of education.

Some taxes were paid under this act, but an appeal was made to the courts, and the case came up as State of Alabama *v.* Southern Railway (115 Ala., 250), with the result that the contentions of the State were defeated. In the first place the act was declared unconstitutional because it contained legislation on more than one subject which was not "clearly expressed in its title," and so violated section 2, Article IV of the constitution.

In effect the court declared it a municipal tax, and therefore violating Article X, section 7, of the constitution. If this act were allowed to stand—

> it would effectually emasculate this constitutional prohibition. It would sanction the levy of a tax by the State for the purpose of public education in the city, which the city itself is prohibited by the constitution from levying and collecting, and which, if sanctioned as to one city might be extended to every other locality in the State, in overthrow of this fundamental law. It would allow a thing to be done indirectly which is forbidden to be directly done.

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[1] 82 Ala. Reports, 242.

[2] Session law 1894–95, pp. 738–740.

In commenting on this decision Dr. J. H. Phillips, superintendent of schools in Birmingham, says, in a recent letter:

> Several of these cities attempted to collect the local tax. The city of Birmingham did collect several thousand dollars. This fund was paid under protest, pending a decision in the courts, which of course was adverse, following the principle enunciated in the Cullman case. No local taxes for schools were successfully collected under the constitution of 1875.

And yet it does not appear that the courts ever passed on the direct question, either under the constitution of 1875 or of 1901, whether a city might not collect taxes directly for schools if it kept within the constitutional limit of 50 cents on the hundred allowed for municipal taxation. The cities have at any rate found it easier to get their money for schools under their general powers to tax.

From this time the separate school districts, including those to which the right to tax was granted in the special acts, obtained indirectly what they could not obtain directly. Under the constitution the counties might levy 50 cents per hundred for county purposes; in the same way municipal corporations might levy 50 cents per hundred for town purposes, but in the eyes of the constitution the separate school district had no standing; therefore the cities taxed themselves as municipalities, and as such assigned a part of the proceeds of these taxes to themselves as school districts. Unfortunately, however, miscellaneous demands were so heavy that little was sometimes left for the schools. Their reports to the State superintendent generally show a part of their school funds as coming from "appropriations by the district" or "appropriations by the city," seldom from direct taxation for schools. In this way, by this legal fiction, the cities and towns have been enabled to develop their schools, and they have thus made possible a school development in the cities altogether creditable. In 1887–88 the funds thus raised for schools in the districts were more than $174,000; in 1889–90 they were estimated at more than $200,000. With 1886–87 Maj. Palmer separated the reports of city and special school districts from those for country schools. The former could now begin to stand alone; the latter still needed support. This will explain the apparent shortening of the school term in 1886–87 to 70.5 days, as compared with the 87.25 days of 1885–86. The later year included only the country schools; the earlier year covered all schools and showed that the city schools had attained a school term (in 1887–88) of 180 days for both white and negro schools in Birmingham; 170 in Montgomery, Selma, and Huntsville; 160 in Tuscaloosa; 181 for whites and 204 for negroes in Eufaula; 200 for both in Decatur; 180 and 160 in Troy; 170 and 140 in Opelika; 120 in Brownville; 190 in Cullman; 178 and 163 in Prattville; 180 and 145 in Uniontown. The trouble was that these special districts served only a small part of the population. In 1888–89 only 17 such special districts, not including Mobile, reported to the State superintendent. Of these 17 districts, 12 reported a school population of 14,261 white and 15,055 negro children; the enrollment was 5,444 and 3,718, respectively; the average attendance about 3,929 and 2,281, respectively. These figures are themselves sufficiently luminous. In none of these places does the school term seem to have been less than 160 days; in one it went to 200, and yet the enrollment on school population was only 31 per cent and the average attendance was only 20 per cent. It is evident that these schools needed something besides money.

During this period educational consciousness began to manifest itself in the better organization of teachers into associations, State and local, white and colored. These bodies held annual meetings, and, though poorly attended and treated with indifference by some of the higher educational institutions, preserved the even tenor of their way, discussed the problems of their profession, and emphasized and strengthened the demand of the State superintendent for more money. Teachers' institutes and reading circles were inaugurated while the professional and technical sides of the teachers' work were being examined and studied in the State normal schools, of which two more were organized for whites. At the end of Maj. Palmer's administration there were normal schools for the training of white teachers at Florence, Livingston, Troy, Jacksonville; and for colored teachers at Huntsville, Tuskegee, and Montgomery. These received their support mainly from the State, except Tuskegee (which even then was drawing on the philanthropy of the North), and to each the Peabody fund made appreciated and appreciable contributions, amounting in 1889–90 to $3,800 for the seven schools. The normal institutes, of which two were held in 1889–90, were supported by the Peabody fund and were intended to arouse the people to the need of better teachers and better schools. They were intended for that class of teachers who could not attend normal schools and they offered courses extending from two to five years. The congressional institutes, organized, as the name implies, in the congressional districts, were intended to meet the needs of still another class of teachers, and the teachers' reading circles were to encourage home reading. The elementary character of this work is indicated by the books recommended for study: Barnes's General History, Page's Theory and Practice of Teaching, Watts on the Improvement of the Mind, Hawthorne's Literature. It was necessary to lay, first, a cultural basis, on which something of a professional superstructure might be reared. The professional spirit was hindered, no doubt, by the failure to grade salaries as well as certificates.

There was also the beginning of an educational press. In 1882 and 1883 the Alabama Progress, published in Montgomery, had advocated education, prohibition, and kindred subjects. Then came the Alabama Teachers' Journal in 1886, published first in Huntsville, later in Montgomery. As its name implies, it was distinctly educational and served as an organ for the teachers of the State.

During this period, also, the graded-school idea began to make progress, especially in the separate or special school districts, which were now leading the State, both in the quantity and quality of their work.

Grading pupils brought up the question of textbooks, which was a serious one. The superintendent discussed a State or county system to prevent the numerous changes and multitudinous variations that afflicted teachers and drained the purses of parents, but the conservatism of the State and the spirit of local independence prevented rapid progress. There was some discussion, also, of a flexible course of study for the "ungraded country schools."

Other needs of the schools were better schoolhouses—for under the law no public money could be devoted to the erection or repair of buildings, or for furniture—longer terms, and better teachers. The system as a whole needed toning up, but to do this required money. This could be secured only by taxation, and to tax required an amendment to the constitution. To secure this required a long, slow process of education penetrating every section of the State, illuminating every corner, and enlightening every voter. With reconstruction before their eyes, the constitution makers of 1875 had been careful to hedge severely about the taxing power. Now that reconstruction was passed and the State restored to its normal self, they found these limitations a stumbling block on progress, which might be removed only when all advocates of education should work in harmony.

Private schools were still of considerable importance in the State; private contributions and subscriptions served to lengthen perceptibly the public term; and on these sources the public had to depend entirely for the erection and maintenance of schoolhouses, except in the separate school districts and cities, where this want was met by appropriations from municipal funds or by the issue of school bonds. The State superintendent advocated a general 3-mill tax and a 5-mill tax in the special districts. The cry was for more money, and with this it was thought all other good things would come to the schools. The question was no longer whether there should be public schools, but whether they should be in accord with the demand of the times. The report of the superintendent showed that the demand for improvement was based on a real necessity, since comparison of school accomplishments in Alabama with those of other Southern States showed up to the serious disadvantage of the former.

There was during the period no very material change in the school law, other than that regulating the school funds. By an act which went into effect October 1, 1887, these were again gathered into the State treasury, from which they were paid out to the teachers quarterly through the county superintendent. They had, under the law of April 19, 1873, been left in the counties to avoid their misapplication by the State authorities. They were now brought back to the State treasury to secure a greater contralization and a better accounting. The law covered all funds devoted to school uses.

Taken as a whole, this administration may be characterized as one of slow but steady progress upward. The class consciousness of teachers was awakening; there was more unity and harmony in their work; their influence was widening; and the cities were beginning to show, by extending and liberalizing their courses, the direct bearing of education on life. The causes of friction were being eliminated, and all parties were working toward an extension of the constitutional privilege of local taxation—the one thing most needed before there could be steady progress.

## IV. THE HUNDLEY AMENDMENT AND AFTER.

Maj. Palmer was succeeded December 1, 1890, by Maj. John G. Harris, who served as State superintendent for four years, and issued three reports, two annual and one biennial. The educational event of the administration was the fight for what was known as the Hundley constitutional amendment. This was proposed by a joint resolution of the two houses of the assembly at the session of 1892–93 and provided that the assembly might—

> confer upon the trustees of the school districts in this State the power to levy within their districts a special tax of not more than one-fourth of 1 per cent [2.5 mills], to be applied exclusively to maintaining the public schools in the districts in which said tax is levied.

It provided further that each race might receive back the proportion of taxes paid by it, but this provision was not compulsory. It was provided that this amendment should be voted on at the general election for representatives on August 6, 1894, and the activities of the department were shaped toward securing this result. In 1893 Supt. Harris organized an educational campaign, published a letter to the people of the State and showed that the weakness of the school system might be easily corrected by legislation; with "more money, longer school period, more trained teachers, and better schoolhouses," the schools would "soon be in the forefront of progress." The United States Commissioner of Education commended his zeal, applauded his efforts, and lent the weight of Federal influence. But all of this was rather in the interest of general education than of the amendment in particular. In fact, judging from what little expression is found in official or semiofficial school organs, the school men were only lukewarm in its favor. A correspondent in the Educational Exchange declared that it was not so much money that was needed as local supervision, and he insisted that $75,000 taken out of the school fund and devoted to county supervision would produce better results than the whole was then doing; another said that, while $600,000 was the annual State expenditure, hardly more than $200,000 was well used. The main force urging the amendment was the county superintendents. They organized themselves into a "Campaign board of education" for the summer of 1894, and held many public meetings, made many addresses, and strove to awaken the people to the opportunity. The State teachers' association said the proposed amendment was "a measure of great importance to all the people of the State and to the cause of public education in particular." They pointed out the fact that in all the States which had an adequate school fund the bulk of it was secured through local taxation, and after citing the right of local taxation in cities and towns under the constitution because they were municipal corporations, denied that there was a "valid reason why corporations should enjoy the privilege of local taxation because they are cities or towns and the same right be denied to rural districts because they are not corporations."

The Hon. J. L. M. Curry, agent of the Peabody fund, addressed an eloquent letter to the candidates for governor on the Democratic and Populist tickets, the burden of which was local taxation, the issue being in his opinion "more paramount than are the issues, Federal and State, which divide parties, local and national." He points out that the school term in Alabama was 73 days, and that 41 per cent of the population was illiterate in 1890, and adds:

> This beggarly array does not fill up the dark outlines. These short schools are in many cases inefficient and inadequate, and the graduates of high schools even are three years behind the German graduates in the amount of knowledge acquired and in mental development. This inferiority is largely attributable to the shorter terms of school years, to the want of professional teachers, and to the small enrollment * * *. Rotation in office, narrow partisanship, inefficiency are the direct fruits of making school offices not places of trust, but spoils of political victory * * *. The State superintendent should remain in office long enough to be thoroughly familiar with the duties of his exalted position, and should be an expert capable of advising executive and legislature, and school officers and teachers, and in full intelligent sympathy with the educational problems * * *. Perhaps the argument most likely to reach the general public is the close relation between public free schools and the increased productive powers of labor and enterprise * * *. Education creates new wealth, develops new and untold treasures, increases the growth of intellect, gives directive power and the power of self-help * * *. The schools in Alabama are handicapped by a clause in the constitution limiting local taxation to an extremely low figure. If by general agreement among the friends of education

> the removal of this restriction could be separated from party politics, and local taxation could be brought to the support of schools, there would soon be an era of educational and material prosperity.[1]

By common consent the school amendment was not made an issue in this hotly contested campaign, for most of the leaders on both sides, including Col. William C. Oates, the Democratic, and Capt. Reuben F. Kolb, the Populist candidate, were generally favorable to its passage. Possible hostility for the fear that the propertyless might avail themselves of the opportunity to levy educational taxes on the rich was disarmed in advance by the requirement of a local vote for the enactment of the law; the fear that negroes might get too much was met by the provision that each race might, if it was so desired, receive what it paid. The amendment at best was merely permissive.

In perfect fairness, it can only be said that the support of the school authorities was little more than perfunctory. Certainly their grief over defeat was not profound. But the amendment had strong friends. Hon. Solomon Palmer was one, and Dr. James K. Powers was another. The latter was chairman of the "Campaign board of education"; he sought to organize the teachers; he spoke and wrote in its advocacy, even calling the school children to his aid by writing argumentative declamations for their use; he declared that schools would be at a standstill without it and became so enthusiastic that he said never before had "so much interest" been shown in an educational measure; he even prophesied its success at the polls. Another enthusiast appealed to metaphor and characterized the amendment as a "lion of learning."

But the chief support of the measure came from the editors rather than the teachers. They alone appear to have grasped its significance. One Birmingham editor said it was "the biggest thing since the war, in Alabama."

The Birmingham Age-Herald was frank in its review of the general school situation:

> All this talk about Alabama's splendid public-school system is rot. Outside of a few of the larger towns, she has the very poorest school system and spends less money than any State in the Union. She is at the bottom of the list of 44 States. Her only hope to pull up is in the school amendment. (Aug. 1.)

In an ironical review it suggested that abolition of the schools was the easiest way to cut down expenses in Birmingham, and remarked, "Our people are asleep on the great question of education" (Aug. 4). On the day before election it said:

> Rising above all partisan considerations in this campaign, fixed in the pure air of patriotism, love of our homes and our children, is the proposed school amendment."

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[1] Letter in Report of Commissioner of Education, 1894–95, p. 1277.

And again:

> Of all the 44 States in the Union, Alabama is the only one that doesn't have local taxation. (Aug. 5.)

"Cast a ballot for the Hundley amendment and have posterity to bless your memory," said the Greenville Advocate.

Other supporters of the measure were the Huntsville Argus, the Heflin New Era, the Cherokee Sentinel (Populist), and the Gadsden Tribune.

But the amendment met with an overwhelming defeat. The constitution required that an amendment to it should receive a majority of the whole vote cast. In Jefferson County 9,156 votes were cast for Oates and Kolb, and 3,519 for the amendment; no one there thought it worth while to vote against the measure. In Mobile County there were 4,049 votes for Oates and Kolb, 877 for and 834 against the amendment. In Bullock County the vote for the amendment was 1,917 out of 2,619, this being possibly the largest majority in its favor in any county in the State.

Hon. Oscar H. Hundley, the author of the amendment, was beaten but not cast down. He had worked for six years to get this bill through the assembly; he would try again.

The Age-Herald was chagrined and spoke plainly.

> In the fight just closed the cowardly politicians held back and dodged. Even the friends of education were—some of them—browbeaten into silence lest speech might lose a vote. (Aug. 11.)

The Educational Exchange admitted that there had been neither marked hostility nor enthusiastic support:

> There was no virulent opposition—there was no organized antagonism. * * * The sporadic attacks upon it were not of sufficient force to provoke an aggressive policy in its behalf. The measure died of indifference; died in the camp of its friends, the most cruel and ignominious fate that could have befallen it.

Beyond this preliminary fight to secure a more liberal clause in the constitution in the matter of local taxation for schools, there was little of moment in the period. The printed reports were brief and imperfect; the statistics were less in amount than usual, more incomplete, and practically worthless.

There were, however, some elements of progress:

1. The growing usefulness of the local and congressional institutes, which were increasing in numbers and in attendance. It was proposed to make the attendance of teachers on these institutes compulsory.

2. The law of 1890–91 made some changes in the administrative features, among them being a return to three trustees for the township in place of the one township superintendent. These trustees now apportioned the funds of the township to each school as they

deemed "fit and equitable," and this was interpreted as more favorable to the whites than the older law had been.

3. Another law of the session of 1890–91 placed on the market some 30,000 acres of "school indemnity lands," which had come to the State from the Federal Government "on account of swamp and overflowed lands, other public lands in Alabama sold or otherwise disposed of by the Federal Government" and acquired as a result of the State act of February 28, 1887.

4. In 1892–93 an act was passed establishing an Industrial School for White Girls. This was the culmination of various earlier efforts but represented a beginning only, $5,000 being appropriated for the organization of the school.

The negro schools in general and the normal schools, white and colored, were reported as making good progress, and there was more promptness in paying the teachers. The lack of uniform textbooks gave trouble as did the question of the third-grade certificates. How to find the amount to be apportioned from the poll tax was also a problem. This was solved by making the poll tax of one year the basis for the next year's apportionment.

This administration was hampered by an unusually serious industrial and agricultural depression, by an exceedingly bitter factional political fight, with more or less hidden fear of possible advantages to the negro, and most of all by indifference.

Maj. Harris was succeeded by Hon. John O. Turner, of St. Clair County, who served for four years, from 1894 to 1898.

His early work included the codification of the school laws as amended and modified by recent assemblies. In its general character the new code did not differ from the old, but there was growing during this decade a recognition of the increasing ramifications of the public-school system. This system no longer included merely teaching of the three R's, nor confined itself to the primary and grammar grades, as had been the idea a generation before.

The grades of teacher's certificates were three: For the third grade applicants were to be examined on orthography, reading, penmanship, practical arithmetic through fractions, primary geography, and the elementary principles of physiology and hygiene; for the second grade, on all the foregoing and on practical arithmetic, history of the United States, English grammar, intermediate geography, and elementary algebra; the first grade required, in addition, higher algebra, natural philosophy, geometry, and the theory and practice of teaching.

To meet these growing requirements the normal schools had been recognized for some years as necessary. Beginning in 1873 they had increased in numbers and steadily developed in their scope and field of operations.

This code shows also that the direct bearing of education on life was more fully realized. In 1885 the assembly tried the experiment of establishing branch agricultural experiment stations with the location of a school at Uniontown, Perry County; in 1889 and 1893 others were established at Abbeville and Athens, and by 1895 six others, making nine in all, had been established in the various congressional districts; from merely agricultural experiment stations they were now being evolved into agricultural schools and were put under the control of actual farmers who were to purchase land and provide buildings. Their funds, however, were as yet very limited in amount, varying from $2,500 to $3,000. To correspond with this provision for boys furnished by the agricultural schools was the Industrial School for White Girls, first organized under the law of 1892–93 and located at Montevallo. Up to this time in Alabama as in other southern States the higher education of white girls had been without official recognition. White boys had been provided for in the Polytechnic School, at Auburn; negro boys and girls had been provided for some years with normal and industrial or vocational training at both Tuskegee and Huntsville.

The most marked tendency of the period in legislation was the creation of separate school districts, with special powers. Between 1876 and 1884–85 twenty-one acts of this character had been passed, some giving the power to tax to the separate district, some withholding this power; at the session of 1886–87 thirteen separate school districts were established; in 1888–89, twenty-five; in 1890–91 and 1892–93, twenty-three each; in 1894–95, twenty-five; in 1896–97 the number rose to nearly seventy; in 1898–99 it was about fifty.

The question of money was uppermost in the formation of these districts, but the supreme court decisions, in case of Schultes *v.* Eberly, decided in 1887, and Alabama *v.* Southern Railway, decided in 1896, stood as lions in the path of local taxation. In the act forming the Montgomery separate school district, passed February 27, 1887, it was met by providing that the city council might "appropriate" not exceeding 10 per cent of the gross revenue for the support of schools. The act of 1885 allowing Tuscaloosa to levy 25 cents is brought forward in the school code as if still in full force; the same amount might be levied in the Troy district; and 20 cents in the city of Gadsden. In fact the legislature was becoming increasingly more and more appreciative of the importance of the educational system and the financial needs of its administrators.

In 1894–95 it began to allow towns like Brewton to issue bonds for schools and schoolhouses; Montgomery and Opelika followed in 1898–99, and it even went to the extreme of permitting the county of St. Clair to levy a special tax of 10 cents for education (act of Feb. 18, 1895), so far as known the first of the kind in the State. St. Clair was followed by Walker in 1896–97, also with a 10-cent tax, by Lamar and Fayette in 1898–99, with a 15-cent tax; by Chilton with a tax between a minimum of 5 and a maximum of 25 cents, and by Baldwin, which could levy enough local school tax to bring the whole county tax up to the constitutional limit of 50 cents per hundred, while another law of the same year allowed Madison County to set aside $150 for county normal schools.

The act providing for the schools of Anniston, passed in 1891, seems nearly a model. The school board was required to make a report to the city council—

> showing the amount of money required for the support and maintenance of the public schools of the city for the next ensuing scholastic year, and for the erection, rental, or repair of the necessary school buildings, together with a statement of the probable amount of money that will be received from the school fund or from any other source.

The city officers were then required to make an appropriation "to supply whatever additional amount may be necessary." They were not required to appropriate for schools more than 20 per cent of the gross revenue of the city, but might in their discretion appropriate larger sums, or make special appropriations for the erection, repair, or rental of schoolhouses.

This seems by far the most liberal of all these local laws, which while they did not always provide for local taxation, at any rate gave greater freedom and flexibility of movement, more liberty and independence, and whetted the appetite for better things.

As far as the routine of this administration goes, there is little to distinguish it from others. The superintendent deplored the slowness of subordinates in making their reports, which in turn prevented him from making his own report on time. He enumerated with some detail the principal grievances which were then delaying the progress of schools: Sickness in his own family; depression in business and stringency in money matters; delay in the payment of teachers; partisan politics; the grafting of new phases of education on the old system and the consequent lack of harmony between parts and need of readjustment; trouble in securing patents for school lands; uncertainty over the school census; and lack of funds for institute work.

Some of these troubles were important, some were not; some were removable by industry and organization; some were merely symptons of an acute state of affairs, while others were chronic. All might be bettered by a skillful administration of the resources at command. The superintendent recommended, as a partial solution: That the census be taken in July instead of August; that some uniform way of selecting school officers be fixed and that they be paid; that the grades of teachers be reduced to two, and that their examinations be uniform and be prepared by the superintendent; that school money be allowed for the erection of schoolhouses; that the per capita apportionment be increased from the then rate of about 75 cents to $1.50, and that in order to provide the necessary money a constitutional amendment be passed allowing local taxation to districts, townships, and counties; that the local district trustees be reduced from three to one and that he be paid; that money for institutes be provided independent of the Peabody fund; that women be made eligible for school offices; and that all sixteenth section land matters be transferred to a special officer.

In the superintendent's report for 1897–98 the same troubles and the same recommendations appear, and to the troubles of the superintendent were now added smallpox and yellow fever. He was further crippled in his work by a shortsighted policy which employed him as a State superintendent of schools and then through "a too rigid economy" reduced him practically to the position of a mere clerk in his own department.

During this administration there was progress; the enrollment was larger and the cities were surely forging ahead. The superintendent claimed that the reports on education in the State were based entirely on the work of the public schools and that this accounted for the low rank assigned.

The State, however, was as yet indifferent, for, while the schools had been pleading for more money for 20 years, the rate of taxation had been lowered from 7.5 mills to 6 mills, and in 1890 to 4 mills. True, the school appropriation had been increased from $130,000 in 1877–78 to $350,000 in 1889–90, but all of this sum over and above $100,000 was within the control of the legislature, and the feeling for economy which followed the reduction of the tax rate to 4 mills and a proper desire to avoid debt even produced a proposition to reduce the school appropriation to the constitutional limit; but, be it said to the credit of the State, such a proposition to halt the wheels of progress met little support, for the State was now almost ready to do openly and frankly those things of educational import which she had hitherto dared do only by indirection—lay State and local taxes for schools as such

# Chapter X.

## THE AWAKENING, 1898–1914.

### I. THE BEGINNING OF A NEW ERA.

With the last years of the closing century the public schools of Alabama began to come into their own. At last they began to feel the pulse beat of modern life and to realize the wider outlook which characterized the times. The new superintendent, Hon. John W. Abercrombie, was an educator by profession and was able to analyze the situation, diagnose the trouble, and suggest the remedy. One of his earliest recommendations was that the law should require the superintendent to be an educator. Hitherto the superintendents had been public men, lawyers, teachers, patriots, but not educators. With the administration of Mr. Abercrombie begins the modern era of public education in Alabama, and his first report, which covers the biennium of 1898–99 and 1899–1900, shows a marked advance.

The assembly of 1898–99 made important financial progress, for it added $100,000 to the direct appropriation, increased the total amount available as interest on the sixteenth section and other land funds, and on the initiative of the State superintendent levied a State tax of 1 mill, equivalent to 10 cents on the hundred, for the exclusive use of schools. This tax was legal, for the constitution of 1875 fixed the total amount of permissible tax at three-fourths of 1 per cent, or 75 cents on the hundred, with no limitations on how it should be applied. The increased legislative appropriation was first apportioned in 1899–1900, when it raised the per capita distribution from 73 cents to $1.05. The next year, 1900–1901, the new State tax became available and raised the per capita distribution from $1.05 to nearly $1.50.

The school funds now amounted to more than a million dollars; but this was all that could be expected from the State as a State, "because the maximum limit of taxation authorized by the constitution has been reached." Then follows a plea by the superintendent for local taxation:

> Then, if our funds are not sufficiently large, what shall we do? Shall we fold our arms and wait until Alabama doubles in wealth? If so, is it not likely to also double in population? * * * What we should do—what other States have done—what we must do, if we would properly qualify our people for citizenship, is to give to counties, townships, districts, and municipalities the power of taxa-

tion for educational purposes. If the people of any county, township, district, city, or town desire to levy a tax upon their property to build a schoolhouse, or to supplement the State fund, for the purpose of educating their children, they should have the * * * power to do it. * * * The right of local self-government is a principle for which the southern people, and especially the people of Alabama, have always contended; * * * yet, in the matter of providing for the education of our boys and girls, it is a right which the fundamental law of the State denies to us. * * * There should be no limit, constitutional or statutory, general or local, to the power of the people who own property to tax themselves for the purpose of fitting the children of the State for intelligent and patriotic citizenship.

During this administration the work of creating special or separate districts by law continued, but not at the same rate. Since these districts were not municipalities, they could levy no tax; but the social advantage which came from this rearrangement of territory in accord with the topography of the country more than justified the break up of the old township system with its straight lines and mutitudinous transfers of children for the purpose of individual convenience.

The town systems were being extended and strengthened, and the cities, like Bessemer and Birmingham, began to issue bonds for school buildings.

In 1899 a general law was passed which sought to correct the many evils that had grown up around the old system of separate county examination of teachers. Under the new law, while the examinations were still held in the county, they were prepared and the papers read by a State board of examiners, through whom came all certificates to teach. By the requirement of examination fees the system was made more than self-sustaining. The requirements of the several grades were not essentially different from those in the law of 1895. Alabama history and composition were added to the second grade and the school laws to the first. Under this law the third-grade certificate was good for two years and could be renewed once; the second-grade for four years with one renewal. The result was a succession of untrained teachers who got a little experience in the school room and then retired to give place to others untried as well as untrained; but still the new law was better than the old, for it tended to encourage improvement.

The question of textbooks had long been a serious one. When individual choice had run to a length that was no longer bearable, county uniformity was tried and found to work well in 17 counties. The same idea was then applied to the State as a whole, and in 1901 there was created a "textbook commission" "to procure for use in the public free schools in this State a uniform series of textbooks."

The congressional district agriculture schools as first organized had been a partial failure, for they tended to develop into the orthodox literary academies.

> These schools are not in all respects what the general assembly creating them evidently intended they should be, viz, high schools in which the agricultural features would predominate. Most of them have been made high schools in which the literary feature predominates.

Latin and Greek, French and German, music and art, history and philosophy had usurped the place intended for practical subjects. Some schools even undertook collegiate work. But this unforeseen development showed that there was as yet a gap in the State system between the primary grades and the college which had not been supplied and for which there was evidently a growing demand. These agricultural schools were entirely under local control; therefore they took such direction as their patrons desired. They became also the objects of factional strife, town jealousies, political and personal prejudices. The law governing them was so amended in 1903 that one composite board controlled them all and so delocalized their administration. In 1901 the minimum length of school term was fixed at five months, during which time "the free public schools of the State shall be kept open absolutely free of tuition fee." This meant that if the public funds were not enough to provide a free school for that length of time a supplement sufficient for that purpose had to be made up by the patrons or there would be no school in the district.[1] It would appear also that this was the first time since reconstruction days that all the schools were absolutely free to all the children for a fixed period of time. Hitherto in many counties it was the custom, says the superintendent—

> for teachers to charge a tuition fee and credit each patron with his pro rata of the public funds. Many people who are unwilling or unable to pay the fee kept their children at home. It is true that those who will claim the privilege may send their children free for as long a time as the public funds will run the schools. Rather than enter their children as the children of parents who are unable or unwilling to pay the fees assessed, many persons let them remain out of school and grow up in ignorance. This system is evidently against the policy of the law.

County supervision was still weak from the lack of education and experience in the superintendents and the smallness of their remuneration, but was making progress in intelligent comprehension and grasp, as their reports show. Another defect in the law was that it made no provision for building schoolhouses. This was still a purely private and voluntary matter which fell upon a few public-spirited men or else—

> some old log church or other dilapidated building is frequently used. Often it is a building without desks, tables, windows, blackboards, maps, charts, stoves, and with backless benches. Children are expected to take pleasure in attending school under these uncomfortable and unattractive conditions.

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[1] If the five months' term was found "absolutely impracticable," it might be made four months. (See the law of Mar. 5, 1901.) As later laws require that the school term shall be uniform in the county, the minimum requirement has been abandoned of necessity.

The superintendent continues:

> I have urged the grading of schools, but as the law does not require it, I have been unable to enforce it. The common schools should be classified as first, second, and third grade, according as they are taught by first, second, or third grade teachers * * * In the school conducted by a third-grade teacher, only third-grade branches should be taught. In the school conducted by a second-grade teacher only second and third grade branches should be taught. In the school conducted by a first-grade teacher, all the common-school branches should be permitted to be taught. Under existing laws * * * a third-grade teacher may teach a second or first grade school, and either may essay to teach college and university branches, which they frequently do.

It was urged that salaries be based on the grade of teacher's certificate held. Compulsory education was discussed, for only about half the children of school age were enrolled, and of these 25 to 50 per cent did not attend regularly.

The recommendations of the superintendent in his report for 1898–1900, based on the situation as it then was, included:

> That the power of taxation be given to counties, townships, districts, cities, and towns.
>
> That the poll tax be assessed and collected by school officials and that the laws governing this be made more rigid.
>
> That after the funds were apportioned to the counties, on the basis of school population, they should be disbursed on that of average daily attendance.
>
> That qualified county superintendents be provided by law, that their pay and length of service be increased, and that they be required to devote all of their time to school work.
>
> That the State board of examiners conduct all teachers' examinations and that a minimum general average and a minimum branch grade be provided.
>
> That means and methods be provided for building and furnishing permanent and suitable schoolhouses.
>
> That schools be classified according to the grade of the teachers; that it be made illegal to teach branches higher than those upon which examinations had been passed; and that salaries be regulated by the grade of the certificate held.
>
> That absolutely free schools for five months be required; that this requirement regulate the number of schools in the township; that supplementary funds given by patrons be used to lengthen the free term.
>
> That when the schools have been made free and available to all a compulsory law for children from 7 to 14 years be enacted and that the question of uniform school books be considered by the assembly.
>
> That since the district agricultural schools had largely failed, having developed into "high schools in which the literary feature predominates," they should all be placed under a single board of control, thus eliminating local influences.
>
> That a central board "be created for the purpose of ascertaining and publishing what schools are prepared to do the work upon which degrees can safely be granted, and that no school be given the power to confer degrees unless it measures up to the standard fixed."
>
> That an unconditional appropriation be made for summer normal schools and that the counties be authorized to make annual appropriations to the same.

Some of these recommendations bore fruit immediately. Through the prompt action of the assembly, they became laws before the expiration of Mr. Abercrombie's term of office and have been discussed as such, but up to the stature of others the State has not yet grown.

In concluding his survey for the two years, the superintendent says:

> In order to keep abreast with the educational thought and progress of the country, I have attended many educational gatherings—county, State, southern, and National. * * * During the past two years a great interest in the cause of public education has been aroused among the people. Within that time difficulties have been overcome, hope has taken the place of discouragement, indifference among the people has vanished. The amount of funds available for common-school purposes has been increased more than 50 per cent; the qualifications of teachers have been raised; incompetent teachers have been eliminated; county supervision has been improved; township trustees have been more attentive; schoolhouses have been made better; a demand for a qualified county superintendency has been created; the school enrollment has been largely increased; teachers' institutes have been held more regularly; and a spirit of educational progressiveness has been aroused among the people. The outlook is most encouraging.

Again he says:

> Teachers have been paid promptly. The efficiency of the teaching force has been advanced beyond estimate. The school term has been lengthened almost 50 per cent. The daily attendance has been greatly increased. Educational interest among the people has received a wonderful impetus. School officials have been more prompt in the performance of their duties. A general public school revival has been conducted.

There was "less discord and more interest." The awakening had come.

But it should not be assumed that this change in educational sentiment was altogther the work of two years, or of a single man. More accurately, it was the result of the work of many laborers extending over many years. The State was now recovering from the long-lasting effects of war; having recovered from war and again attained to a degree of financial independence, it began to answer the call from within to a newer and broader life. The quickening effects of this broader outlook; increased financial resources; a realization of the real educational position of the State, despite the flattering glosses of politicians; increasing self-consciousness and enhanced self-reliance, together with a forward-looking superintendent were the things that made for this educational renaissance. Let it be understood also that these things came in spite of constitutional limitations, as will be shown in the next section.

Mr. Abercrombie resigned the office of State superintendent July 1, 1902, to become president of the University of Alabama. His unexpired term was filled out by Harry Cunningham Gunnels, who published the report for 1901–2. He continued the work as outlined by his predecessor, and renewed most of the recommendations of the earlier report.

## II. THE CONSTITUTION OF 1901.

The State of Alabama adopted a new constitution in 1901, and it went into effect November 28 of that year. It is marked for what it did in the matter of educational legislation and for what it did not do.

The limitation on the total amount of tax that might be levied by the State was fixed at 65 cents on the hundred, as compared with 75 cents in the constitution of 1875. The earlier instrument left the assembly to divide this as it pleased; the later one says 30 cents on the hundred shall be levied for public schools (par. 260). The new constitution thus put into the organic law, accentuated and emphasized, a principle which lay at the bottom of the annual lump-sum appropriation made by the assembly since 1875 in accord with the constitution of that year, and which in 1899 had crystalized into a general State tax of 10 cents on the hundred for public schools. It here recognized and formally granted a demand for more liberty in the matter of taxation which, by implication and exercise, adhered in the old. It took from debatable ground and made constitutional a tax which, while already exercised by the State, was at best of questionable legality under court interpretations of the constitution of 1875. By making imperative the 30 cents per hundred tax for the use of public schools it changed a lump-sum appropriation that had to be struggled for at every recurring session into a perpetual gift, which grew automatically with the increasing wealth of the State. The last year under the lump-sum arrangement, together with the 10-cent tax (1903–4), produced $831,210; the first under the constitutional provision (1904–5) of 30 cents produced $880,545. This first increase in dollars was insignificant, but the moral effects of the law, by the removal of uncertainty, by the security arising out of a constitutional provision, and the certainty of future growth, were very great. In 1912–13 the 30-cent tax had increased to $1,565,472. In 1913–14 it was $1,734,302.

The new constitution granted to the counties power to levy a total county tax of 50 cents on the hundred; of this amount it was now formally provided that 10 cents on the hundred could be levied for school purposes. This school levy might increase the total tax levy from $1.15, the new constitutional limit, to $1.25, the old limit, but could be levied only when three-fifths of the qualified voters favored the increase. (Par. 269.)

By implication this right had adhered in the old constitution. At any rate some of the counties acted on the supposition. In 1895 the assembly had passed an act allowing St. Clair County to levy 10 cents per hundred for schools. This was followed in 1898–99 by Walker (10 cents), by Fayette and Lamar (15 cents each), and in 1900–1901 by Baldwin, which was to have a graduated county school tax beginning with 5 cents on the hundred and increasing to 20 cents.

It was understood that these counties had the right to levy this tax under the constitution, for the new tax kept within the constitutional limit, but it was also thought that without legislative permission they could not appropriate the money thus raised to the schools, hence these special acts. The new constitution made this clearly marked tendency in the more progressive counties apply to the whole State. It thus recognized the trend of the times. It yielded to an imperative demand from the people.

In the matter of cities, towns, villages, and other municipal corporations the total tax limit was fixed by the new constitution, as by the old, at 50 cents on the hundred, and excluded, under the interpretation of the supreme court, a tax for schools as a part of the general power to tax. To Montgomery was now given the power to levy a special tax of 75 cents for the interest and principal of the public debt, for public schools and public conveniences; Decatur might levy 50 cents for "public schools, public school buildings, and public improvements"; while New Decatur and Cullman might levy a similar tax "for educational purposes." (Par. 216.)

Another phase of the new constitution which made for democracy and decentralization, but not for the continuity of school development, was the clause which declared the State superintendent to be ineligible as his own successor. (Par. 116.)

To summarize: The State tax of 30 cents was made obligatory; the county tax of 10 cents was optional; the municipalities might tax (i. e., appropriate) for schools under their general, not under special, power, while four named municipalities were given special powers to exceed the constitutional limits. None of these powers, except those to the four cities, were new. They were all embraced, by implication at least, in the old constitution of 1875, and were exercised as a part of the general taxing powers of municipalities. They had been acted on as implied powers, and as such had not come up for consideration by the courts. Public-school education in Alabama owes something to the constitution of 1901, but the framers of that instrument were the followers, not the creators, of public opinion. They wrote into the new constitution principles which had been worked out under another name, proved out in practice, and for which there was imperative demand. They did not touch the phase of the school question which was of vital importance, which is of paramount importance to-day and toward which all Alabama education tends—the question of direct taxation for schools in towns and municipalities and in the local units. For this failure there were reasons. So far did the constitution makers fail in this vital principle that the ink on the new document was hardly dry before the State superintendent began agitation for an amendment. He says in his report, dated September 30, 1902:

> An amendment to the constitution should be submitted allowing school districts to levy a local tax for school purposes whenever the people of the district desire it. The schools of Alabama can never rank with the schools of other States until provision is made for local taxation.

### III. CONTEMPORANEOUS CONDITIONS AND PROGRESS.

The constitution of 1901 changed the sessions of the legislature from biennial to quadrennial and provided that no State superintendent should be eligible to succeed himself in that office. Mr. Gunnels was succeeded by Isaac William Hill, who had been long engaged in educational work.

There was during his administration but a single session of the legislature. It passed, however, important school legislation, including the creation of the State textbook commission and the reorganization of the administrative boards of the agricultural schools. These laws have been discussed already as a part of the previous administration.

A general law was passed (1903) allowing municipalities to levy, provided they kept within the constitutional limitation of 50 cents on the hundred, a special tax of one-fourth of 1 per cent for the purchase, maintenance, and improvement of school property and "the maintenance of public schools."[1]

Another act, passed by this legislature on October 1, 1903, provided the machinery in accord with which the counties were permitted under the new constitution to levy the special 10-cent tax for public schools. By address and the aid of a banquet at which all the leading men were present Jefferson County, in which Birmingham is located, was induced to lead the movement in voting the tax. Walker, Talladega, Union, and Tuscaloosa followed Jefferson, and within the next three years 32 others adopted the tax and the proposal was defeated in 4. The total number voting the tax prior to September 30, 1906, was 37; in most of these the law was a success; such opposition as had developed soon disappeared, and the superintendent makes the remarkable statement that "the people seem actually to have fallen in love with voting taxes on themselves for school purposes."

But the most important, the most wide-reaching, and revolutionizing in its influence of all the acts of 1903 was that for "redistricting the public schools of the State and for the management and control of the same."

We have seen that, beginning about 1876, the custom of creating separate or special school districts had been a growing one. Under the constitution these districts could not levy a tax, but the topographical arrangement of the new district was a great improvement over the rectangles of township lines in the matter of convenience, and, through the trustees who directed them, these separate school districts made for local school government. This principle of school organization, as we have seen, grew to considerable proportions in the early nineties, and by the law of September 30, 1903, was practically extended to the whole State. Briefly, this law provided that "township lines for school purposes * * * are hereby abolished." County redistricting boards were created and instructed to lay out their counties anew "into public school districts according to centers of population and natural barriers"; every child was to be, if possible, within 2½ miles of a schoolhouse, and no district was to contain less than 15 school children. For each of these new districts there was to be elected a local board of three trustees, who were to take the school census, care for school property, employ schoolteachers, visit and report on schools, and have general management and control. Chairmen of these local boards were to elect four county trustees who, with the county superintendent, were to make up the county board of education, in whose hands the county school system was placed. It was enacted further, as a sort of reward for diligence in well-doing, that when any district had provided a graded school system for all children of school age for not less than eight months in the year they might elect five district trustees instead of three and "assume entire control of the public schools therein," only reporting to the county authorities. The county superintendents were made fiscal and disbursing officers and were paid 4 per cent of their disbursements up to $1,800 per year. The act was not to apply to "any county heretofore districted by law and which has a special levy from the county for the support of the public schools or to school districts heretofore established by law." Each incorporated city and town was also made a separate school district, and so the whole State was thus reorganized on the basis of population and natural barriers, a result which should have been reached long before.

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[1] Laws of 1903, pp. 398-399.

The county now became the basis of administration, instead of the township, and each school in the county was to be kept open as nearly the same length of time as might be. Under the old township law grievances had arisen, especially in the black belt. Among these was the pernicious practice of paying to parents their pro rata of the public school fund should they for any reason feel disposed to keep their children out of the school. This custom had its roots deep in those laws of ante bellum days which had to do with the distribution of the sixteenth section funds and now produced social injustice when administered by unscrupulous county officers, if allowed to pass the scrutiny of the State officials in Montgomery. Says the State superintendent:

> Under the old law there was no one who had direct control over the common schools of the counties, and "sharp practices" sprang up which were perversive of the spirit of public education. To illustrate: One township in a county not only ran its public schools eight months with a first-class teacher, but also defrayed a considerable portion of the expenses of boys and girls off at college, while another township in the same county did not secure sufficient funds to run its schools four months. The new law not only equalizes the school term, but also enables school officials to detect attempts, should they be made, to pay the expenses of boys and girls in college out of school funds.

Under the county system law there was much less inducement to pay funds to parents than there had been under the old township law. Under the old law a term of four months would meet the minimum legal requirements; under the new all schools in the county must be of the same length. Payments to parents reduced the school term of the whole county, and as the unit of administration was enlarged the number of men who would resent such injustice was increased.

With this brief summary of the new school legislation of the State goes a review of educational progress for the period.

There began to appear during this period a well-defined effort, steady and long continued, conscious and emphatic, to develop a professional consciousness. This was manifest in the increased interest in and the growing resources available for the normal schools. The University of Alabama began a summer school. Reading circles, county teachers' associations, and other agencies were making for increased professional training, although the county institutes had not as yet been so systematized as to be of much service. While this progress was making on the professional side, the higher schools were making good on their special lines. The Girls' Industrial School, at Montevallo, while still hampered by lack of funds and accommodations, was using to advantage what it had; and the agricultural schools, after being separated from the six lower grades, were now to a large extent delocalized and were turning to the agricultural and other practical work for which they had been intended. To these schools there was now added at the Alabama Polytechnic Institute a summer school for farmers. The first session was for 10 days only, but the attendance reached 400.

The new law regulating the examination and certification of teachers worked successfully. It encouraged the upper grades, and the State was soon unable to meet the demand for first and second grade teachers. It was estimated that the standard had been raised already 50 per cent since the passage of the law. Another change for the better was the payment of teachers monthly instead of quarterly, but "the average Alabama schoolhouse" was still "not only a disgrace to the community in which it stands but a disgrace to the State," and under the law not a cent of public money could be used for school buildings or for incidental expenses, but was all apportioned on the basis of school population. The day of the schoolhouse did not come till the organization of the Women's Association for the Betterment of Schoolhouses. A revision of the school census made under the act of 1903 showed the rolls padded to the extent of 28,218 pupils. The old school census showed 707,269, which was reduced by the newer and more careful enumeration to 679,051.

Under the new constitution the school funds increased in direct proportion to the taxable wealth of the State. But this constitution had at the same time dealt a temporary blow to the poll-tax fund. This fund was apportioned to the race which paid it, but the negro, being no longer allowed to vote, declined to pay the poll tax, and this tax dropped from $156,043 in 1900–1901 to $89,810 in 1904–5. A better system of collection, however, raised it to $179,095 in 1911–12.

The recommendations made in Supt. Hill's second report show that the schools were advancing. He urged that the public school be graded so that the whole of the school work might be correlated and articulated from the primary through the higher schools to the university; that at least one high school in each county be established; that a supplementary State appropriation of $300,000 be made for schools and $50,000 for school buildings; that an amendment to the constitution permitting a school-district tax be submitted by the legislature, because the available funds were still insufficient for a 5 months' school taught by even a third-grade teacher, without private contributions to supplement the public funds.

The reports of the county superintendents reveal more business and educational qualifications than had been the case in earlier years. The type of the men engaged in education was rising all along the line. There was progress in quality as well as quantity. Professional consciousness was developing.

The effects of the county tax, which usually increased the length of the term a month, began to be visible; some of the towns (as Girard, in Russell County) were allowed to vote on bonds for schoolhouses; Dothan furnished books as well as tuition and made the whole absolutely free; while some of the counties, as Henry, still had to assess an entrance fee on each child to make the funds hold out; Escambia levied the State tax of 30 cents for schools, then a county tax of 20 cents,[1] and was ready to levy the additional tax of 10 cents permitted by the constitution. Surely this county at least was finding itself.

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[1] This 20-cent tax was permissible because the total county levy without it did not exceed 30 cents on the hundred.

Mr. Hill was succeeded in 1906 by Hon. Harry C. Gunnels, who completed his term of service in 1910, and gave place to Hon. Henry Jones Willingham. He became president of the State Normal School at Florence in 1913; his term was completed by Hon. William F. Feagin, who in December, 1914, entered upon a new term of four years.

In recent years the character of public education in Alabama has been changing radically. It is no longer a mere matter of teaching the three R's, but a wider and broader idea of education has been evolved and has given character both to State legislation and to the State superintendent's reports. The work of the department has become more systematized; the successive administrations are better articulated one with another; personal equations count for less; and the superintendent no longer dominates the system in accord with his own ideas, as was entirely possible in the earlier days when the machinery of the department was less in amount and less complex in character. He is no longer the system, but the head of a system to which he seeks to give direction; the individual is less; organized society as expressed in public opinion and public organization is more, and is now reaching out into related and soon to be correlated fields of educational activity.

This personal domination of the superintendent which characterized the administrations of the past was nowhere more evident than in the annual reports, and nowhere else does this individuality retain its hold with such tenacity. It would seem that here at least no effort has ever been made to standardize the reports in such a way as to make out of the whole series a single connected whole. Their use causes the student constant difficulties, for hardly are any two alike. Each superintendent's reports are dominated by the personal equation. They vary in form and content, in fullness and accuracy. They sometimes give two or more sets of figures for the same thing and agree neither with themselves nor from year to year. The many blanks left in the tables are presumably beyond the power of the superintendent to remedy, but certainly not so the long columns which are untotaled. The various items are not treated uniformly, and one which may be fully reported for two or three years is then dropped altogether; hence it becomes next to impossible to trace any particular line of school development with that minuteness of detail sometimes necessary, and any statistics based on these reports can not at best be anything more than approximate. In 1906–1908 the superintendent's report is made up entirely of the statistics and narrative reports from the counties. There is no attempt to interpret these local reports or to give an idea of any connected educational development during the period. This characteristic dominated also the reports for 1909 and 1910, but the next superintendent did not print the county reports as a series of local disconnected systems, made up of isolated, independent, and more or less uncorrelated fragments, but undertook in his report to interpret the tendency of the times, to present the evolution of public school education as a whole, and to point out its rapidly changing and broadening character.

Nowhere is this evolution in the character of education more visible than in school legislation, which more than ever begins to concern itself with higher, technical, and industrial education. Witness the educational acts of 1907 and 1911, which have little to do with the schools in the narrower sense, except as to the usual routine appropriations. They deal with broader issues: To aid and extend the field of technical education; to provide for industrial schools for boys and girls; to sell university and other school lands; to establish more normal schools; to appropriate for the deaf and blind; to provide funds for medical education; to define and provide for delinquent children; to widen the usefulness of agricultural, girls' industrial, boys' trade and industrial schools; to provide for the higher colleges and the university; to form farm-life clubs and encourage farm demonstration work; to establish high schools, Negro reformatories, etc.

During these years the superintendents' reports discuss, besides the various phases of education in the narrower sense, like enrollment, attendance, schoolhouses, local taxation, compulsory attendance, graded schools, teachers' certificates, etc., such cognate and kindred subjects as: The supervising of rural schools; school-improvement associations and their activities; rural lyceums and libraries; county high schools and inspectors of the same; agricultural schools, normal schools, county superintendents, etc.

As in the past, so now, enrollment and attendance are matters which call for serious consideration. True, as will be seen by reference to the statistical appendix, the enrollment and attendance are both growing in absolute numbers, but the relative increase is small, and there are still a few county superintendents who are content to quote platitudes about trusting "that the people of Alabama will never so far forget their duty to their children as to require penal statutes to force them to comply with parental duties," but others of their number realize the situation and see the remedy as clearly as the State authorities. Says E. R. Harris, county superintendent of Lamar, in 1908:

> Education in Alabama is too partial as to the number reached—too little adapted to the various needs of our population. If we would restore respect for authority, obedience to law, prevent frauds, political corruption, oppression of the poor, and save the State we must have universal education. To secure universal education, regular attendance * * * must be required by the State.

Two years later E. C. Glover, superintendent of Henry, wrote:

> I also favor free textbooks for the public schools of Alabama. I believe that the State ought to furnish the books along with the money to pay the teachers. Then when we have free schools, when the schools are free in truth as well as in name, compulsory education would not penalize poverty, and many who now oppose such a law would give it their hearty support.

Says the State superintendent in 1910–11:

> Perhaps we have no right to expect a larger proportion of our young people to attend school when this question is determined absolutely and only by the will of the parents and children themselves.

If we take the reports of the superintendent for the last three years and interpret them in the light of this remark, we shall find that the enrollment in 1910–11 was 73 per cent of the school population; in 1911–12 it was 72 per cent; and in 1912–13 it was 74.7 per cent. For the same years the average attendance was 63 per cent, 61 per cent, and 60 per cent, respectively, of the enrollment. Now, if we translate these percentages of enrollment and attendance into dollars, we shall find them equal to 63/100 of 73/100, 61/100 of 72/100, and 60/100 of 74.7/100, or 46 per cent, 44 per cent, and 45 per cent. All of which means, assuming the present force of teachers able to handle the total school population if in actual attendance, that the State received 46 cents for each dollar spent in 1910–11, 44 cents in 1911–12, and 45 cents in 1912–13.

This measurement is of average attendance in dollars. Now consider it in length of school term. The actual term in 1910–11 was 127 days, in 1911–12 it was 132 days, and in 1912–13 it was 133 days. But since the per cent of the total school population in regular attendance was only 46 per cent, 44 per cent, and 45 per cent, respectively, the true length of term was 57.4 days in 1910–11; 58.08 days in 1911–12; and 59.85 days in 1912–13.

These figures are based on the total enrollment and attendance for these years. It includes cities and high schools, but excludes private and denominational schools, and is confined to the whites, for they are the more favored and represent the high-water mark of both intelligence and capacity. If negroes were admitted into the calculation the figures would be still less favorable.

The inevitable conclusion, therefore, follows that, at the present rate of enrollment and attendance, the State of Alabama may continue to pour money as water into these depths of inefficiency and never get back more than 45 cents on the dollar. If the State wishes to recover from this condition of educational bankruptcy, she must not only increase the length of term, but increase the per cent of the equally important factors of enrollment and average attendance.

The above is a consideration of efficiency as measured in attendance and length of term only. If we subtract also the efficiency lost to instruction in the school by the interruption of classes we may find that the standard of efficiency actually attained under this system of perfect freedom is perhaps only one-third, possibly only one-fourth, of what might be attained under the intelligent administration of a compulsory law.

No wonder the superintendent declares:

> The conclusion seems irresistible that Alabama without much more delay will be compelled to enact a reasonable compulsory-attendance law, and thus follow in the footsteps of all but a half dozen of the States of the American Union * * *. Public sentiment in this State appears to be growing strongly in favor of a law requiring compulsory attendance * * *. Such a law will be popular and greatly beneficial.

In his report for 1912–13 he enters into an estimate of the additional expense that would be entailed by compulsory education:

> The overwhelming majority of our public schools, especially in the rural districts, are crowded for only a few weeks in the middle of each winter session. A teaching force which is sufficient to care for this crowded condition during less than half the session is employed in almost all cases for the entire session, and, therefore, if those who now enroll in school were required to attend regularly, the additional cost of maintenance, so far as they are concerned, would be practically nothing. The only additional cost in the maintenance of sufficient school facilities to care for all the children who ought to be required to attend would apply only to those children who are not now enrolled and who have not been in the habit of attending any school whatever. * * * An investigation of the subject fails to disclose any State or any civilized country which has repealed a compulsory education law. * * * It is modified from time to time, usually extended in its scope and in its requirements.

The legislature of 1911 passed three laws which serve to unify the general administration of the schools. One of these defined and extended the duties of the county superintendent. He was required to keep an office at the county seat, to visit all the schools in his county, to examine into the condition of school funds, and to make monthly and annual reports. He was to be paid 4 per cent on disbursements, and if employed on full time might be paid a fixed salary of not less than $1,000. This law went into effect October 1, 1913. Another law provides that the county board of education "select annually some suitable person in the county to act as treasurer." This choice has usually fallen on some local banker who has been willing to perform the duties of the office in exchange for the advantage of the deposit of county school funds. He pays the teachers monthly.

Another law (Apr. 18, 1911) defined the qualifications necessary for teachers' certificates:

For third-grade certificates applicants were to be examined on orthography, reading, penmanship, grammar, practical arithmetic, United States history, geography, the elementary principles of physiology and hygiene and agriculture, theory and practice of teaching.

For second-grade certificates, in addition to the above, additional requirements in arithmetic, history of Alabama, English grammar and literature, intermediate geography, United States history, and civics and class management.

For the first grade, in addition to the above, algebra, geometry, physics, elementary psychology, the school laws of Alabama, and advanced English.

For life certificates, the history of education.

The result of the law governing examination of teachers, granting certificates, and grading salaries according to the certificates held has been a gradual rise in the capacity and training of the teachers and a tendency to gradually eliminate the lower grades, but the salaries are still discouragingly low, and the cheapest man is still almost the universal favorite. In 1912–13 male white teachers received on an average $429; women received $346. Among the negroes men received $191 and women $153. This indicated a general increase all along the line, except in the case of negro women, who fell back $2 per month. Said the superintendent in 1911–12: "Alabama receives to-day more than $40 a month for her convicts, or approximately $500 gross income from each convict hired. This is considerably more than is paid for the services of the average public school teacher in Alabama." Then he naively adds: "This statement of fact is not made as a suggestion that teachers should leave off teaching and become convicts," but it does present for the consideration of patriotic citizens the further fact that the State as an owner esteems more highly the labor of its negro convicts than as an employer it does the services of its white teachers.

The superintendent's report for 1913–14, moreover, shows a further widening of the difference between the pay of city and rural teachers. White city men teachers received an average of $1,032 and women teachers an average of $533 as against $337 and $293 for rural men and women teachers, respectively. For negroes the figures were $355 and $262 as against $132 and $123. The salaries of rural teachers have decreased while those of city teachers have increased. The superintendent adds:

> It is only fair to conclude that the best teachers of both races will gravitate toward the cities and towns more strongly than ever unless our present salaries are increased, and any thought of decided improvement along the lines indicated above will make it clear that we shall never have the funds until our constitution is so amended as to make it possible for us to provide them by local taxation.

Along with the questions of better teachers and better salaries for teachers is bound up another on which these of necessity rest. The question of resources is still the burning one in the State. School funds are still insufficient to meet legitimate school needs. Up to October 1, 1912, the 10-cent county tax allowed by the constitution of 1901 had been voted in 44 of the 67 counties for such length of time as suited the people. In a few counties the tax was proposed and defeated. In one or two it was tried and then abandoned, the result being manifest injury to the schools; in another it was changed from schools to roads. But even when in operation this tax does not supply sufficient funds, and both towns and counties have from time to time gotten around its limitations. In 1901 Escambia had been required by law to levy for the year 1901 and for "each year thereafter" a special school tax of not less than 2 mills of the total county tax which was to be "used for the support and maintenance of the public schools."[1] It will be noted that this act antedated the constitution of 1901 and exceeded the limits provided by that instrument. Again, it is found that Baldwin levied in 1909 a 3-mill tax for schools and thereby won the distinction of being the only county in the State at that time whose local funds exceeded the general fund from the State and the poll tax combined.[2]

In the case of Mobile, which has since attained the same rank, a loss of some $37,000 in annual revenue was sustained about 1909 as a result of the cutting out of liquor license fees when State prohibition went into effect. It was necessary, therefore, to retrench the activities of the schools, increase fees and levy a 2-mill tax to get more school money. In 1912–13 this was reported as $124,250, the largest in any county, except Jefferson, which that year received $189,450 from a similar source. In 1909 Girard, Seale and Hurtsboro resorted to a bond sale to raise money for building schoolhouses; in 1910 Jackson County and Thomasville, Clarke County, did the same, but all of these makeshifts could not produce as much money as was needed for the schools. In 1908 public income was supplemented from private sources, by fees or contributions, to the extent of $299,481; in 1909 it was $286,000; in 1910, $255,000; in 1911–12, $310,084; in 1912–13, $354,702; and in 1913–14, $429,605. Hand in hand with the subjects of compulsory attendance, efficient supervision, and general development goes their complement, the question of local taxation. These four are the paramount issues in the educational world of Alabama to-day. Being more concrete and tangible, local taxation has received more attention than compulsory attendance, has been more considered by the people and is undoubtedly making progress. From the statements just made its necessity is perfectly apparent.

Says the superintendent:

> To depend on subscription or tuition fees is folly, and every observant man knows it. If the money could be obtained in that way it would be wholly unfair, because * * * a few individuals in each community would have the supplement to pay,

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[1] See Laws, 1900–1901, p. 1416.

[2] See report, 1909, p. 11. Up to Oct. 1, 1914, the county tax had been voted "by more than 45 Alabama counties."

> and they would in few instances represent those who were most able to pay it. If public education is a public duty * * * the only fair and equitable means of raising a supplemental fund * * * is through some method of taxation * * *. Each county is now allowed * * * to levy * * * 10 cents on the hundred dollars of property * * *. Forty-four counties have already taken advantage of this provision * * *. If our people are capable of self-government, they ought to have the privilege of saying on election day whether they are willing to levy a tax of more than 1 mill in any given county in support of the education of their own children, and when the county has levied a reasonable school tax on the property of the whole county for the maintenance of all the schools in the county, then the qualified electors in any school district, whether town, city, or rural, ought to have the additional privilege of saying by their vote whether they will levy on the property of that district a reasonable additional tax as a further supplement to their own school or schools. If, however, our people are not capable of self-government, and if they are so anxious to pay taxes that they would vote upon themselves an unreasonable rate of taxation, then, of course, our present constitution, which denies them the privilege of passing on such a question, ought not to be changed.[1]

The number of separate schools increased in 1911–12 over the previous year by 1 per cent. There was substantially a similar increase for 1912–13. The superintendent declares that there are already too many, and while consolidation and transportation have been but little discussed in the State, he recommends the combining of one-teacher schools and reports that in some sections the teaching of high-school subjects has been consolidated so as to leave the grade teachers free for grade work. If this plan continues to work out successfully, it will be the beginning of centralization on a larger scale.

In 1914 there was inaugurated an educational survey of three counties which were regarded as typical of the whole. The counties chosen were Morgan in the north, Macon in the east central black belt, and Covington in the south. The survey was conducted by Messrs. Baker and Sibley, inspectors of rural schools, and was published by the department in its Bulletin No. 43.

It was thought that a survey of the white schools of Macon, where the negroes outnumber the whites at the rate of 6 to 1, would give "a fair idea of conditions generally prevailing in the white schools in the black belt," and a preliminary study of the counties showed that "the negro schools in Morgan and Covington Counties were representative of the general conditions of negro schools throughout the State."

The survey reported on the general questions of population, literacy, farming, economic conditions, and public health. In educational matters it discussed at length general administration, teachers, buildings, grounds, material equipment, values of school property, and vitalizing agencies. It covered the field with much thoroughness, emphasized growing strength in some directions, and pointed out continued weakness in others. It declared that there is a tendency toward building up an efficient county administration as a basis for good schools, but that back of all these efforts lies the necessity for more money. There can at present be no local taxation; private, supplementary contributions are small and uncertain, and salaries are pitifully low. The average for the three counties is $353—

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[1] Report 1911-12, pp. 9-10. See similar remarks in the report for 1912-13, pp. 10-14.

> or an average of $27.75 per month distributed throughout the year. As the teacher must live in the summer if she is to be ready for work in winter, the pay should be thought of as a year's income. These figures include all public school positions in the counties except the county superintendents. If these had been included the figures would have been $29.07 per month instead. Of course no chauffeur, deputy sheriff, or railway fireman would work at such wages. Many day laborers get more.

Then, to drive this lesson home, the survey prints the pictures of an automobile and a schoolhouse side by side. It gives the initial cost of the automobile and the average cost of the schoolhouse, the annual maintenance of each, and concludes that—

> If one man in a rural community owns a very moderately priced automobile, he has invested in it more than the entire community has invested in its school plant. It is also possible that he spends more upon the upkeep of the automobile than the community spends upon the upkeep of the school, even including the teacher's salary.

The latest annual report of the State superintendent, that for 1913–14, continues agitation along the lines of earlier reports and of the county survey considered above. The superintendent urges in particular that more effort be made to promote community organization. This is to come through the common school, the institution nearest the soil, which should be made the apostle of intelligence, of industry, and of thrift for the regeneration of rural life. With a country life commission to serve as a clearing house of information and ideas and to promote the development of community organization "we may justly hope to weld the people of any district * * * into one coherent whole for its own uplift with the country schoolhouse as the base of operation."

In the matter of constructive legislation the superintendent urges what has been urged before: Local taxation, a State board of education, consolidation, and compulsory attendance.[1]

The last word on the educational situation is that of Gov. O'Neal, who, in his message to the legislature in January, 1915, points out the shortcomings of the present system. The most serious of these he considers the apportionment of school funds to the counties on the basis of the whole school population, which the experience of the State has shown to be "manifestly unjust and inequitable." He also shows how this apportionment works out in practice in favor of white teachers in the black belt counties as against those in the white counties. He quotes the statistics of 10 counties in each group and then adds:

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[1] Rept. Dept. Educ., 1913–14, William F. Feagin, superintendent.

> It will thus be seen that there was apportioned to these 10 counties mentioned in the black belt for the fiscal year 1913 from the 3-mill tax and the poll tax the sum of $410,709.55, used for the education of 12,868 children attending the schools in those counties; whereas there was apportioned the same year to 10 white counties the sum of $233,428.10 for the education of 28,440 children attending the schools in those counties. These figures show that the State paid for the education of each child that attended school in the black belt counties mentioned during the fiscal year 1913 * * * the sum of $31.917 per capita; whereas it only paid in the white counties mentioned the sum of $8.207 per capita.

He then comments on the situation as follows:

> All students on the subject agree that an equal per capita distribution of funds as now required by our State constitution is not an equitable distribution, is not based on sound principle and can not afford the relief which should be given, and is unsatisfactory and unjust. It does not accomplish the equalization of burdens and advantages, and its abandonment in the interest of justice is the first and most important step on educational reform. * * * The present method of apportionment gives the money of the State to communities for the education of children who do not attend and who do not expect to attend the public schools. * * * Under the present system we put an active and continual premium on nonattendance and encourage the school-teachers of the country by consideration of their own personal interests to discourage attendance. * * * The real unit of cost in our public schools is not the number of children who may or may not attend, but the cost of the teacher.

The governor declares further that the educational interests of the State demand "a more efficient system of county supervision and administration." He urges the repeal of the constitutional provision which forbids more than 4 per cent of the school funds being expended for anything other than teachers; he urges consolidation of schools, health supervision, and the creation of a State board of education with full administrative powers; he urges that the normal schools at Daphne and Moundville be changed to county high schools, and that the appropriations and equipment of the four normal schools remaining be increased; that the standard of teaching be raised; that better schoolhouses be erected and that they be used as social centers; that a course of study be prepared for country schools; that education be vocationalized and that a proper survey of the educational field be made by intelligent educators.[1]

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[1] Governor's message to the Legislature of Alabama, Jan. 12, 1915, pp. 51-78.

# Chapter XI.

# MISCELLANEOUS AND SUPPLEMENTARY AGENCIES.

## I. NORMAL SCHOOLS AND OTHER NORMAL AGENCIES.

Normal training for teachers dates from the early days of the system. Gen. Perry discussed its importance and necessity in ante bellum days, but there was no formal organization of normal schools till the reconstruction period. So far as known, the first act in Alabama making special provision for the education of teachers was that passed by the State board of education on August 11, 1868, that there be established—

> in each of the cities of Mobile, Montgomery, Huntsville, and Selma, and in each of the towns of Talladega, Eufaula, Athens, Tuscumbia, Marion, and Evergreen [and Portersville, omitted from law by mistake], one or more classes of advanced pupils (each of which shall consist of not less than 15 pupils) who may desire to become fitted for the occupation of teachers, to which class instruction shall be given in the most approved methods of teaching, and opportunities of practice afforded in the instruction of pupils of less advanced grades in the common schools. Pupils may be admitted into any of the normal classes on the recommendation of any teacher of a common school * * * only upon a promise in writing that the pupil will teach in the schools of Alabama, when properly qualified so to do, for at least two years.

No limitation was put on the expenses that might be incurred by these classes. There was the simple provision that they be certified by the county superintendent and paid by the State treasurer. In 1869 Dr. Cloud reported that nine normal classes, with 300 pupils, had been taught in six different places during the previous year. We have no direct testimony as to the success of these schools, except that given by Supt. Hodgson in January, 1871, and quoted already. His estimate is decidedly unfavorable, but we must make allowance for the rancor of political bitterness. Mr. Hodgson adds to his criticism: "The subsequent abandonment of the schools, it is fair to presume, has resulted in a loss to this department of $12,000 for the year 1869 and $25,000 for the year 1870." These amounts were, to be exact, $5,371.85 and $16,582.10.

In his special report of January 28, 1871, Supt. Hodgson says:

> At the last session of the board the old schools were abolished, and a bill was passed establishing 13 normal schools, 7 for the training of white teachers and 6 for the training of colored teachers. This was three times as many as the State of New York possessed for 25 years, and more than twice as many as she possesses to-day. Your Excellency has seen proper to withhold your signature from that bill.

But what was evidently only a variation of the original idea appears in the legislation looking toward teacher-training in separate institutions enacted by the State board of education on December 20, 1871, for on that day four distinct acts were passed. The first provided for four normal schools, one each at Montgomery, Huntsville, Marion, and Sparta, for the training of colored teachers of both sexes. To meet the expenses of these schools, $4,750 was appropriated. There was the usual requisite that pupils teach two years in the public schools of the State in return for tuition. A second act provided for four normal schools for white teachers, one each at Talladega, Tuscumbia, Scottsboro, and Midway; and for their support $4,500 was provided. A third act provided for a normal school for white women teachers (location not fixed) and set aside $5,000 for its use. Another act established a Central Normal School for the education of white teachers in connection with the State university, and provided $5,000 for its use.

These acts were not all put into operation. In December, 1872, another act is found appropriating $3,250 for the three colored normal schools at Marion, Huntsville, and Sparta, and it is probable that the legislation then passed in regard to the State normal school at Florence goes back to that of the previous year, although there is nothing to connect it directly with the earlier act to provide for white women teachers, and the supplementary act dealing with the Florence Wesleyan University provides for the education of white male teachers. A fund of $5,000 was provided for the use of the school. A year later (Dec. 5, 1873) this act was so amended as to admit both men and women to the school. At the same time another act provided for the establishment of a normal school and university for negroes in connection with the Lincoln School, at Marion, and appropriated $2,000 (increased by act of Dec. 15, 1874, to $4,000) for normal purposes; a similar school for negroes was located at Huntsville, and $1,000 provided for its maintenance. No other acts relating to normal schools seem to have been passed during the reconstruction period, and this is the beginning of teacher training in the State.

The total sum paid by the State for normal instruction in the scholastic year 1873 (Oct. 1, 1872 to Sept. 30, 1873), was $9,750, of which $5,000 went to the white normal school at the university and $4,750 was divided among the colored normal schools at Montgomery, Marion, Huntsville, and Sparta. The next year, 1873–74, the total was $8,000, of which $5,000 went for white teachers at Florence and $3,000 to the colored schools at Marion and Huntsville. In 1874–75 they received $10,000. In 1875–76 the school at Florence had 65 normal pupils.

The laws relating to normal schools, passed by the State board of education, survived the end of reconstruction and were brought over into the code of 1876 and into the act of February 8, 1877. Under the provisions of that act there was established permanently in the buildings of the Florence Wesleyan University at Florence "a school for the education of white male and female teachers," and $5,000 was provided for the support of the faculty exclusively. In the same way the new school act again establishes in the building of the Lincoln School in Marion "a State normal school and university for colored teachers and students," for which $4,000 was appropriated, and for the "normal school for the education of colored teachers" at Huntsville $1,000 was appropriated. It will be quickly noticed that these laws were merely a reenactment of the legislation of the board of education passed in 1872 and 1873, and since that time the principle covering the training of prospective teachers has been fully recognized in the State.

There are now six normal schools in the State devoted to the education of white teachers and three for negroes teachers. To the funds of all of these institutions the State is the principal contributor, but important gifts have been received from the Peabody and Slater funds and in the case of Tuskegee from many different sources. Indeed, by far the greater part of the funds of that institution have come from the outside. In 1913–14 the total contribution to the cause of normal schools by the State was $114,500. Of this sum Florence, Jacksonville, Livingston, and Troy received $20,000 each; Daphne and Moundville, $5,000 each; $16,000 went to Montgomery; $4,000 to Normal; and $4,500 to Tuskegee. Each is required to report regularly to the State superintendent.

Besides the normal schools established and supported by the State whose statistics are given later, there have been other schools organized from time to time which have made their own proper contribution to the cause. Most important of the outside agencies contributing to this end was the Peabody education fund, through which for a number of years pupils were sent regularly from Alabama to the Peabody Normal College in Nashville, Tenn., for a thorough course of pedagogical training. In 1882 the Peabody fund established 16 Peabody scholarships in the normal school at Florence, for which they paid $2,000. In 1885–86, besides the $2,000 contributed for scholarships at Nashville and a similar amount to the school at Florence, the fund appropriated $300 each to the normal schools at Jacksonville and Huntsville, $400 to that at Normal and $300 to the Peabody school district. In 1886–87 and later years both the amount and direction of this donation varied from time to time. At the time that the Peabody board was supplementing public funds by sending prospective teachers to Nashville, the State was encouraging the private organization of teachers' institutes in the counties. Says the State superintendent in his report for 1878–79:

> These institutes have been organized in nearly every county in the State. They are generally well attended. In addition to the awakening of new interest among teachers, these institutes promise to be the means of uniforming and improving methods of instruction and discipline in the schools, with a general approach to uniformity in textbooks.

In 1879–80 there were 115 institutes held, but unfortunately they were massed in about half the counties, while the other half had none. In 1880–81 the number was 89; the next year there were 122; and up to this time they had been purely voluntary organizations. The superintendent now recommended that they be taken over by the State and supported out of a fund raised by taking $100 from the school fund in each county. They were to cover a month in time and be established for each race. As a result of this agitation, a law was passed about 1884–85 which provided that teachers' institutes should be held in each county. The county superintendent was made the responsible officer and every licensed teacher was required to attend. For the year 1885–86 the Peabody fund contributed $500 to their support and lent them the dignity of its name. Later the financial responsibility was shared by the State, and as many as eight white and five colored institute conductors were in the field in 1891, when the Peabody fund donated $3,500 to the work. In 1892, 1893, and 1894 they were conducted by congressional districts, because the county unit had been found too small. In 1894–95 the reports show that the Peabody contributions had been transferred to the regular normal schools, and, while the State appropriation for institutes remained on the statute books, it was no longer available, being conditioned on a similar sum from the Peabody trustees. The responsibility for the institutes was thus thrown back, under the law, upon the county superintendents, and with the rise of the State normal schools they became for a time of less and less significance. In 1903–4 it was said that, while three or four institutes were held a year in each county, they were not meeting the purpose for which intended.

In 1911 a new institute law was passed. It provided $5,000 for institutes to be held one week in each county under the direction of paid expert directors. All teachers except those holding life certificates were required to attend, and their purpose was declared to be—

> to provide some professional training and instruction to that large body of the teaching force who have not had the privilege of receiving professional training in normal schools or the teacher-training department of other higher institutions.

For the use of negro institutes, located at given centers, $1,000 was provided.

Other organizations, private in origin and character, but contributing to the upbuilding of schools, are the Alabama teachers' associations. The white teachers had been first organized in 1856 as the Alabama Educational Association. They had annual meetings and supported a school journal, but like most other things educational went down in the mad storm of war. There was a temporary revival in 1871, but the time was not ripe. In July, 1882, in Birmingham, the organization was revived under the name, Alabama Teachers' Association. Curiously enough, the colored teachers were organized that year for the first time as the Alabama State Teachers'

Association. As a result of this similarity in name, the white teachers soon went back to their original name and are now known as the Alabama Educational Association. Through this association the teachers are now thoroughly organized, they have annual meetings, their proceedings are published in large volumes, and much discussion takes place covering many phases of modern education. The association has served a useful purpose in bringing the teachers from different sections of the State together, has made better acquainted those who have to deal with different phases of the same problems, and is fostering a much closer correlation of educational forces than has hitherto been known in the history of the State. It is by no means an unimportant adjunct to the work of the normal schools.

Still another agency in the training of teachers, one which supplements the normal school, the teachers' institute, and the teachers' association, because it can be brought into use at any time and place, is the teachers' reading circle. In his report for 1882–83 the State superintendent reports the organization of the Alabama Teachers' Reading Circle, whose object was "to induce all teachers to pursue a four years' course of reading, specially selected so as to be of the greatest benefit to them." But this movement did not last long, and in 1893 agitation was renewed. At a meeting of the Alabama Educational Association held in Montgomery that year, such an organization was proposed. The next year it was stated that there was already a Teachers' Lyceum, and it was resolved that the "association indorse this lyceum movement, adopt it as our official reading circle, and urge its organization in every part of our State." But the movement seemed to have been premature, and little came of it. In 1908 its revival was proposed by C. W. Daugette; organization was effected in 1909. The books selected for the first year's reading were: Phillips's Old Tales and Modern Ideals; Kern's Among Country Schools; and Dutton's School Management. It was reported at the end of the first year that 40 counties had been organized and 2,000 copies of the above books bought. A Young Peoples' Circle was added in 1910. A small library of 28 volumes, costing $10, was adopted for the elementary grades, while one of 13 volumes, costing $5, was selected for the high schools. After the passage of the rural library law in 1911, a working arrangement with the new organization was effected, and the two have since developed in harmony, each strengthening the other. In 1912–13 there were 2,967 white teachers and 427 colored teachers who secured and read the three books prescribed for this course of professional reading. The increase of teachers taking this work among the whites was 10 per cent and among the colored 21 per cent. "This remarkable showing is a development of scarcely more than three years. It developed from a beginning so small three years ago as to be almost a negligible number," says the State superintendent.

In 1913–14 the white teachers who were following the reading course numbered 3,937; the negro teachers numbered 345.

Still another aid in the training of teachers may be mentioned here. The educational press had its origin in Alabama in the Southern Educational Journal and Family Magazine, edited and published by F. H. Brooks, in Mobile, in 1843 and 1844. It was short-lived, apparently, only six monthly numbers appearing, the last of them being for March, 1844. It was a magazine of general educational information and had little direct application to Alabama beyond advertising a series of Alabama readers and other books used in the primary schools of the day.

After the suspension of Brooks's Southern Educational Journal there was a blank until Gen. Perry established his Alabama Educational Journal, which was published at Montgomery from January 1, 1857, to September, 1859, making two volumes, one in quarto and one in octavo form. It was semipopular in character, and its value has been considered already in the chapter on the work of Gen. Perry and Capt. Duval. Its place was supplied by the Southern Teacher, "a journal of school and home education," which was published at Montgomery by W. S. Barton, July, 1859, to April, 1861, or later. It was the desire of the editor to become a sort of connectional educational organ for the South as a whole, but his ambition was stilled by war.

In April, 1871, Col. Joseph Hodgson, then State superintendent, established the Alabama Journal of Education. It was merged the same year into the Alabama Educational Magazine and this into a paper called the Advance.

Then came the Alabama Progress, established in Montgomery by George P. Keyes, and first issued March 18, 1882. It became the "official journal of education" for the department and was "suspended for a few weeks" August 25, 1883. It had been very general in character and had many features of a newspaper. Then came in May, 1885, the Alabama Teachers' Journal, published first at Huntsville, later at Montgomery. It was edited by J. A. B. Lovett and was more strictly professional in character. It completed its fourth volume with September, 1889. No other volumes were published, apparently. It is evident that Alabama was not yet productive soil for educational publications. But the times were improving. In April, 1889, J. H. Phillips and others began the Educational Exchange, in Birmingham. It was published from that city through 1891, then removed to Montgomery and continued under the direction of J. M. Dewberry. It was taken back to Birmingham in 1895 and has since then been published there. It is now issued by the Educational Exchange Co., and having completed its twenty-eighth annual volume may be counted as a fixture.

The most important data connected with the normal schools now in existence is given in the following table by five-year periods, 1872–73 to 1912–13. It shows that their influence and usefulness is increasing with the development of the State.

*Statistics of Alabama normal schools, 1872–73 to 1912–13.*

| Schools. | Teachers. | Students. | Normal students. | Graduates. | Volumes in library. | Value of equipment. | Income, all sources. | Total expenditures. |
|---|---|---|---|---|---|---|---|---|
| 1872–73: | | | | | | | | |
| Florence [1] | 4 | 80 | 10 | | | | | |
| Huntsville [2] | | 57 | | | | | $1,000 | |
| Marion [2] | | | | | | | 1,250 | |
| 1877–78: | | | | | | | | |
| Florence | 4 | 147 | 47 | | | | 5,000 | $5,000 |
| Huntsville | 2 | | | | | | 1,169 | 1,103 |
| Marion | 4 | 129 | | | | | 2,850 | 2,850 |
| 1882–83: | | | | | | | | |
| Florence | | 184 | 92 | | | | | |
| Huntsville | 4 | 268 | | | | | 2,939 | 2,784 |
| Marion | | 211 | 133 | | | | 8,027 | 7,921 |
| Tuskegee [3] | 4 | 126 | | | | | 2,727 | 2,442 |
| 1887–88: | | | | | | | | |
| Florence | | 218 | 178 | | | | 10,661 | 10,325 |
| Jacksonville [4] | 8 | 176 | | | 1,000 | | 5,250 | 5,110 |
| Livingston [5] | 5 | 126 | 37 | | | | 2,500 | 2,500 |
| Troy [6] | 4 | 439 | 80 | | | $17,000 | 4,200 | 4,200 |
| Huntsville | | 302 | 135 | 6 | | | | |
| Tuskegee | 24 | 525 | 425 | | 1,800 | 76,060 | 22,328 | 19,328 |
| Montgomery [7] | 3 | 358 | | | | | 3,000 | 3,000 |
| 1892–93: | | | | | | | | |
| Florence [8] | | 300 | | | | | 9,000 | 8,822 |
| Jacksonville | | 135 | 42 | | | | 4,154 | 4,136 |
| Livingston [8] | 14 | 131 | 44 | | | | 3,638 | 2,319 |
| Troy | 13 | 382 | | | | | 7,600 | |
| Huntsville [8] | 22 | 306 | | 18 | | 35,226 | 26,750 | 26,603 |
| Tuskegee [8] | | 919 | 794 | | | 200,000 | 64,000 | |
| Montgomery [8] | | 859 | 272 | | | | 10,000 | |
| 1897–98: | | | | | | | | |
| Florence | 10 | 314 | 225 | 41 | | 56,000 | 16,122 | 14,587 |
| Jacksonville | 7 | 197 | 52 | 11 | | 10,250 | 4,086 | 4,020 |
| Livingston | 11 | 183 | 76 | 24 | | 14,000 | 3,491 | 2,388 |
| Troy | 23 | 578 | | 23 | | 22,500 | 10,595 | 9,910 |
| Normal [9] | 34 | 458 | 163 | 77 | | 45,000 | 33,500 | 11,257 |
| Tuskegee | 88 | 1,047 | | 30 | | 300,000 | 107,488 | 89,358 |
| Montgomery | 26 | 808 | 477 | 8 | | 35,000 | 14,325 | 14,325 |
| 1902–3: | | | | | | | | |
| Florence | 9 | 354 | | 52 | | 50,000 | 12,926 | 13,252 |
| Jacksonville | 8 | 388 | | 12 | | 53,250 | 9,131 | 8,612 |
| Livingston | 23 | 374 | | 8 | | 16,600 | 9,134 | 8,148 |
| Troy | 12 | 340 | | 10 | | 38,400 | 11,615 | 12,044 |
| Normal | 7 | 468 | | 148 | | 76,037 | 15,785 | 15,104 |
| Tuskegee | | 1,497 | | 124 | | 572,599 | 169,609 | 169,609 |
| Montgomery | | 1,050 | | 13 | | 47,600 | 15,500 | 15,000 |
| 1907–8: | | | | | | | | |
| Florence | 13 | 352 | | 30 | | 62,000 | 20,921 | 20,921 |
| Jacksonville | 19 | 405 | | 22 | | 47,500 | 19,510 | 19,077 |
| Livingston | 16 | 275 | | 14 | | 52,000 | 19,300 | 20,434 |
| Troy | 13 | 398 | | 24 | | 43,750 | 21,655 | 18,851 |
| Daphne [10] | 3 | 90 | | 3 | | 28,050 | | 2,500 |
| Normal | | 267 | | 77 | | 97,445 | 18,749 | 18,749 |
| Tuskegee | | 1,574 | | 84 | | 956,580 | 260,013 | 252,708 |
| Montgomery | 27 | 1,010 | | 22 | | 50,500 | 16,457 | 16,457 |
| 1912–13: | | | | | | | | |
| Florence | 20 | 575 | 349 | 39 | 6,050 | 165,000 | 90,305 | 88,965 |
| Jacksonville | 18 | 561 | 320 | 14 | 2,500 | 56,000 | 29,028 | 29,007 |
| Livingston | 18 | 402 | 402 | 43 | 2,250 | 125,000 | 30,179 | 26,488 |
| Troy | 19 | 329 | 224 | 26 | 4,000 | 57,000 | 29,245 | 29,245 |
| Daphne | 9 | 200 | 95 | 9 | 1,000 | 35,000 | 6,202 | 6,172 |
| Moundville [11] | 7 | 70 | 29 | 3 | 100 | 6,500 | 5,478 | [12] 5,161 |
| Normal | 28 | 343 | 156 | 37 | 9,000 | 155,000 | 38,681 | 38,632 |
| Tuskegee | 190 | 2,600 | 763 | 184 | 20,056 | 1,371,527 | 388,033 | 388,033 |
| Montgomery | 37 | 1,185 | 388 | 30 | 400 | 70,000 | 21,183 | 21,170 |

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[1] For white men, organized in 1872; later, coeducational.
[2] For negroes, organized in 1871; coeducational.
[3] For negroes, organized July 4, 1881, with 30 pupils.
[4] For white men, organized 1883; later, coeducational.
[5] For white women, organized 1883; all other normal schools are now coeducational.
[6] For white men, organized 1887; later, coeducational.
[7] Transferred by legislature about 1886 from Marion and reestablished as Alabama Colored People's University, at Montgomery. Act declared unconstitutional; reestablished by act of Feb. 23, 1889, as the Montgomery State Normal School for Colored Students.
[8] Report for 1893–94; that for 1892–93 not given.
[9] For negroes, formerly called Huntsville.
[10] Organized in 1907; coeducational.
[11] Organized 1907–8.
[12] See act of Apr. 14, 1911. Sess. Laws, 1911, p. 417.

## II. CITY SCHOOLS.

The organization and development of city schools in Alabama harks back to Mobile. As we have already seen, it was in that city that the public-school system had its birth and earliest development. There experiments began in 1826 and had a slow and unsatisfactory evolution until 1852, when the school law was revised, and there was a real renaissance of public-school interest. The schools were then reorganized, developed more civic interest, took on new life, and were approaching the modern ideal of public schools supported by all and free to all. This explains why the Mobile organization was the only city system before the war and hence far ahead of the rest of the State. It obtained such a hold on the popular favor that it stood the stress of civil war, did not suspend operations till the spring of 1865, and was soon after reorganized.

Then came reconstruction, when it lost its distinctive organization and was absorbed into the State system. The constitution of 1875 restored its ancient privileges and enacted the provision that in matters of education the new constitution should apply to it—

> only so far as to authorize and require the authorities designated by law to draw the portion of the funds to which said county will be entitled for school purposes, and to make reports to the superintendent of education as may be prescribed by law.

The article on taxation prescribed further that Mobile might until 1879 levy 1 per cent on valuation and after that three-quarters of 1 per cent "to pay the expense of the city government." This was one-quarter of 1 per cent more than other cities might levy; so that there were more funds available for the school. This provision for the three-quarters of 1 per cent was brought over into the new constitution of 1901. That instrument provided also that three-quarters of 1 per cent might be levied (the general limit of municipal taxation being one-half of 1 per cent) by Decatur, New Decatur, and Cullman, to be used for public schools and public school buildings. No other cities were allowed to levy such special taxes, and as we have already seen, the help that has come to the cities in the matter of public-school tax has not come through granting the taxing power direct to the school.

There were a few acts passed in reconstruction days which looked to a practical extension of the Mobile idea of differentiating city schools from the other parts of the public-school system of the State. In 1870 acts were passed by the board of education, then the legislative as well as the executive power in school matters, which gave separate official organization to the school of Montgomery and Selma. In 1872 Opelika, Eufaula, and Birmingham were added to the list, and in 1874 Huntsville and Dadeville. These acts defined the boundaries of the districts, and by separating them from the surrounding territory gave them opportunity for a greater individuality and independent development. From 1871–72 accounts of these schools occur with more or less regularity and fullness in the reports of the State superintendent. In the reports for 1871–72 and 1872–73 Montgomery and Selma appeared; in 1873–74 Birmingham and Eufaula were added to the list, and in 1874–75 Huntsville appeared, making five cities that received special treatment. It will be noticed that Mobile is not included in these separate reports. In fact the semi-independence of Mobile, while making greatly for the advantage of her schools, has seriously militated against the completeness of the State reports.

With the reorganization that followed the adoption of the new constitution in 1875, these special city systems were retained. Oxmoor was soon added to the list, the whole system was brought over into the new code of 1876, and Marion was added by the act of February 5, 1877. It will be noted that none of the special acts passed during the reconstruction régime contained the provision for special taxation. But this provision appears in the act creating the Oxmoor school district, the first of these acts passed under the Democratic régime. It is significant that this act, apparently the first relating to education, passed under the new constitution, should also be the first to voice the necessity for local taxation. This is now nearly 40 years since. Educational leaders, idealists, and men of action thought it necessary then. How much more is it needed now!

Under these acts the separate districts were allowed by the law creating them to have their proper share of the sixteenth-section and State funds. They were given their own separate organization and so made free in the matter of administration from the limitation of the old township system. They thus secured needed flexibility and freedom of movement, and so useful was this separate organization that the creation of separate school districts grew rapidly. In the nineties more than 50 such districts were created at a single session, and in 1903 the old township system for school purposes was entirely abolished.

The one thing which differentiated the separate districts, developed first in the towns and later extended to the country, was the greater flexibility and freedom of action. There was another reason which made for their organization in the earlier years. This was the hope of using them as a basis for local taxation. Beginning with Oxmoor in 1875 and extending to the Birmingham act of February 18, 1895, the cities, towns, and separate districts through their special organization have tried hard to secure the right of local taxation. Numerous special school charters were passed with this provision inserted, but the unincorporated places went down in the Cullman case (Schultes *v.* Eberly, 82 Alabama) and the cities and towns in the

Birmingham case (State of Alabama *v.* Southern Railway, 115 Alabama, 250). Nor was the right of local taxation for education recognized by the constitution of 1901. They have ceased to try to obtain results along those lines, having been entirely blocked by the courts. In 1903 there was passed a law which provided that municipalities might purchase school property and erect school buildings. This act carried with it the power to levy a tax of 25 cents on the hundred, provided their whole tax did not exceed the constitutional limit of 50 cents on the hundred. It does not appear that any test case involving the validity of this act has ever come before the courts.[1] It might also be pertinently asked if the same funds could not have been raised under the general municipal power to tax and thus have avoided the risk of an unfavorable decision. It is probable, however, that the main purpose of this law was to give the cities power to make appropriations for this particular purpose after the money was raised.

In general the course of the evolution of the various city systems has been the same. In most cases, certainly as far as the older towns are concerned, the public schools have grown up out of various private academies, in whose hands the subject of education was left in earlier days. As the municipality grew in strength and social consciousness, the functions of education were gradually taken over. In some instances the board of trustees of the private academy was made by law the board for the new city system. In some cases it was put under the care of a special board; in others it became the care of the mayor and aldermen, and to these boards were given the power usually exercised by boards of education.

Funds were secured in various ways. The acts creating special school districts provided that they should receive their pro rata of the sixteenth section of State school funds; there were some private contributions; there were others from the town or county, or both, and when all of these failed to produce enough to meet necessary expenses, tuition fees were charged. For this reason the city schools in particular, like the State public schools in general, have not been always free, but have attained this goal only by slow stages as the towns are themselves able to increase their appropriations.

It will be noted also that these city appropriations have come from the general city budget, not from taxes levied for schools, for this was declared unconstitutional under the organic instrument adopted in 1875, nor had the current set itself sufficiently strong toward education to place such a provision in the constitution of 1901. These schools are now reaching a crisis. They must have more money.

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[1] Hon. Robert C. Brickell, attorney general of Alabama writes: "I find that the act has been carried into the Code of 1907, and is now section 1458 of said code. This section is substantially the same as the act of October 6, 1903, with the exception that the tax of one-fourth of 1 per cent may be levied, provided such municipality shall not exceed its constitutional limit of taxation."

Notwithstanding the fact that the cities have not been able to give their schools the funds needed for their proper development because of these constitutional limitations, it does not take a very detailed examination of the school reports to see that they are steadily forging ahead of the country districts. There are various reasons for this, most of which are inherent in the fundamental distinction between city and country. The city has a larger and more closely knit population. If not more homogeneous, it is more aggressively aware of its educational needs, and larger schools make possible a better school organization. Then, municipal progress is greater, because cities are generally more willing to tax themselves up to the limit and city property is both more compact and greater in amount. The constitutional limit of taxation was the same in either case (50 cents on the hundred) until the constitution of 1901 permitted the counties to levy an extra 10 cents, but notwithstanding this advantage the cities have more than held their own as reports on income and the length of the school term will indicate.

It does not seem desirable to enter into any extensive survey of the fortune of the schools of particular towns, yet a paragraph or two in this direction will not be out of place.

As already seen, the schools of Montgomery and Selma were provided for in 1870, and their reports date from 1871–72. Acts for Opelika, Eufaula, and Birmingham were passed in 1872, and their reports appear for 1873–74. Huntsville and Dadeville began in 1874, and since then the organization and development of city (or separate district) systems has been more or less regular, and has been carried on in more recent years at an increasing rate.

Under the present law the city schools are divided into four classes: Class A, those of 25,000 inhabitants or over, includes Birmingham, Mobile, and Montgomery; class B, those with between 5,000 and 25,000 inhabitants, includes ten cities; class C, those of between 1,000 and 5,000 inhabitants, has 66 cities and towns; class D, includes all incorporated places of less than 1,000 inhabitants, and numbers 164 towns and villages. So useful has this classification proved to be that school districts with an enrollment of less than 100 pupils are found on the list. Of the cities in class A, Mobile has already been discussed at length in this bulletin. Montgomery had her system reorganized in 1882, and at that time did not own a school building or have any equipment worthy of the name. Its enrollment was about 700 pupils; three years later these had increased to 1,730 pupils taught in five schools. In 1912–13 her enrollment was 4,934, and the total expenditures were $92,124.

But like a chapter from the Arabian Nights is the story of the rise of Birmingham, the new iron and steel center of the South. The town itself does not antedate the Civil War. In 1873 it was visited by an epidemic of cholera. Values were destroyed and the town almost depopulated. There was pinching poverty, sorrow, and despair. Out of these misfortunes came the efforts to organize a public school system in October, 1873, under the law of 1872. Col. J. T. Terry took the lead in raising the necessary money for a school building, and the land for the same was donated by Col. James R. Powell, for the Elyton Land Co. The schools were finally opened in March, 1874, and in the next nine years had eight superintendents. In 1883 they reorganized the system and appointed a new superintendent. When he, the ninth in lineal succession, took charge in 1883–84, there were 1,620 pupils of school age, with 14 schools and 16 teachers; the total enrollment was 967, and the average attendance was 510. The total expense for teachers that year was $1,290. For the year 1912–13 the corresponding figures were: School population, 43,659; schools, 62; teachers, 609; enrollment, 25,320; average attendance, 17,883; amount paid to teachers, $369,749; while the total expenditures were $511,766. This immense growth for the last 30 years has been under the administrative direction of a single superintendent, John H. Phillips, who has seen the school system develop from frail and weak beginnings into its present strength. This development has not always been along lines of pleasantness. The opposition was sometimes strong and frequently aggressive, but out of it all the schools have at last emerged strong and vigorous. Based on safe and sure foundations, they are now ready for a wider field of usefulness, which will come only when the city has authority to give her schools the funds which she is anxious to levy for their use, but which she is as yet forbidden to levy by a too conservative constitution.

It has not seemed proper to trace further the educational history of particular cities, but to give instead the statistics of the educational growth of the older cities and towns by five-year periods beginning with 1872–73. From such a table we can see the gradual growth of educational facilities and so compare them with corresponding figures for the State as a whole. It is evident, first of all, that these statistics are very incomplete. But, assuming that they furnish a fairly accurate picture, is there any conclusion which may be drawn?

If we examine the statistics of school population, enrollment, and average attendance, we are struck by the small increase of attendance over 40 years ago. From this standpoint, measured in terms of average attendance only, it would appear that some of these schools are not now more efficient than in earlier days. While they have been able to do well by the children in actual attendance, their per cent of social efficiency is lowered directly as they have failed to secure the enrollment and attendance of all the children of school age. In this respect the efficiency of the city school is but little better than that of the State as a whole, for we find that while the average attendance in Birmingham (40.8 per cent) and Montgomery (37.5 per cent) was larger in 1912–13 than the State average in 1911–12 (34.9 per cent), the attendance of Florence, Huntsville, Selma, and Tuscaloosa was less, and with this low attendance, reaching in no other city as much as the Birmingham average of 40.8 per cent, what becomes of the excellent school terms of these cities extending from 174 to 180 days? It means that the average length of the most efficient of them is really only 40.8 per cent of 176 days, or the equivalent of 71.81 days. It would, perhaps, be impossible to present a more eloquent argument for compulsory attendance.

In the matter of accommodations, most of the cities are woefully lacking, some of them having less than 50 per cent of the seating capacity that a compulsory-attendance law would require. This means that little additional progress in the city systems can be expected until a constitutional amendment permits a special school tax to provide funds for the greater accommodations and increased equipment needed to provide for the new pupils that will be brought into the schools under any compulsory-attendance law.

*City school statistics, 1872–73 to 1912–13.*

| Cities. | School population. | School enrollment. | School attendance. | Total income. | Total expenditures. | Schools. | Term, in days. | White teachers. | Negro teachers. | Average monthly pay of teachers. | Value of school property. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1872–73: | | | | | | | | | | | |
| Birmingham | [1] 497 | [2] 266 | [2] 247 | [1] $414 | [2] $1,260 | [2] 6 | [2] 160 | [2] 4 | [2] 1 | [2] $38.75 | ........ |
| Eufaula | [1] 784 | [2] 252 | [2] 148 | [1] 653 | [2] 850 | [2] 7 | [2] 92 | [2] 4 | [2] 3 | [2] 35.41 | ........ |
| Huntsville [2] | 1,653 | 455 | 403 | 2,265 | 3,880 | 9 | 170 | 5 | 5 | 50.00 | ........ |
| Montgomery | 3,327 | [2] 1,120 | [2] 880 | 3,743 | [2] 9,336 | [2] 18 | [2] 164 | [2] 9 | [2] 9 | 62.78 | ........ |
| Selma | 1,475 | [2] 830 | [2] 410 | 1,659 | [2] 11,450 | [2] 14 | [2] 204 | [2] 10 | [2] 7 | [2] 77.04 | ........ |
| 1877–78: | | | | | | | | | | | |
| Birmingham | 386 | 268 | 182 | 303 | 746 | 6 | 157 | 4 | 2 | [3] 177.29 | ........ |
| Eufaula | 1,015 | 204 | 160 | 956 | 775 | 7 | 86 | 4 | 3 | [3] 106.25 | ........ |
| Huntsville | 1,283 | 378 | 286 | 1,151 | 1,260 | 8 | 130 | 5 | 3 | [3] 161.00 | ........ |
| Montgomery | 3,004 | ........ | ........ | 2,870 | ........ | .... | ........ | .... | .... | ........ | ........ |
| Selma | 1,736 | 922 | 596 | 1,584 | 1,409 | 14 | 240 | 8 | 6 | [3] 77.60 | ........ |
| 1882–83: | | | | | | | | | | | |
| Birmingham | 1,057 | 500 | 454 | 629 | 2,095 | 12 | 200 | 8 | 4 | [4] 53.50 | ........ |
| Eufaula | 1,104 | 350 | 240 | 657 | 800 | 4 | 140 | 2 | 2 | [4] 30.00 | ........ |
| Huntsville | 1,615 | 344 | 262 | 961 | 1,175 | 7 | 160 | 4 | 3 | [4] 45.00 | ........ |
| Mobile (County) | 23,865 | 6,924 | 5,590 | 14,133 | 49,522 | 124 | 146 | 93 | 40 | [4] 43.00 | ........ |
| Montgomery | 3,793 | 1,626 | 1,385 | 2,257 | 3,520 | 24 | 180 | 14 | 10 | [4] 62.00 | ........ |
| Selma | 2,021 | 746 | 597 | 1,203 | 1,667 | 19 | 200 | 12 | 7 | [4] 85.41 | ........ |
| 1887–88: | | | | | | | | | | | |
| Birmingham | 3,261 | 2,156 | 1,425 | 79,735 | 62,886 | 45 | 180 | .... | .... | [4] 53.90 | ........ |
| Decatur | 498 | 411 | 175 | 4,373 | 4,033 | 2 | 200 | .... | .... | [4] 50.25 | ........ |
| Eufaula | 1,219 | 452 | 200 | 1,199 | 1,199 | 2 | 192 | .... | .... | [4] 37.50 | ........ |
| Huntsville | 1,388 | 520 | 380 | 4,016 | 4,117 | 2 | 180 | .... | .... | [4] 43.00 | ........ |
| Mobile (County) | 27,264 | ........ | ........ | 18,808 | 48,190 | .... | ........ | 37 | 38 | 40.08 | ........ |
| Montgomery | 3,670 | 1,543 | ........ | 21,862 | 21,385 | 5 | 170 | .... | .... | ........ | ........ |
| Selma | 2,476 | 891 | 631 | 10,811 | 9,423 | 2 | 170 | .... | .... | [4] 72.72 | ........ |
| Tuscaloosa | 1,936 | 679 | 441 | 25,603 | 25,587 | 2 | 160 | .... | .... | [4] 42.50 | ........ |

[1] Figures for 1873–74.

[2] Figures for 1874–75.

[3] White teachers, presumably for the year.

[4] White teachers, per month.

*City school statistics, 1872–73 to 1912–13*—Continued.

| Cities. | School population. | School enrollment. | School attendance. | Total income. | Total expenditures. | Schools. | Term, in days. | White teachers. | Negro teachers. | Average monthly pay of teachers. | Value of school property. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1893–94: [1] | | | | | | | | | | | |
| Birmingham | 10,124 | 4,194 | 2,936 | $64,395 | $50,548 | 85 | 177 | .... | .... | .... | .... |
| Decatur | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| Eufaula | 316 | 250 | 198 | 5,521 | 5,521 | 2 | 180 | .... | .... | [2] $48.00 | .... |
| Huntsville | 1,884 | 723 | 560 | 3,586 | 5,120 | 2 | 160 | .... | .... | [2] 41.43 | .... |
| Mobile (County) | .... | 6,645 | 5,287 | 82,556 | 81,651 | 105 | 161 | 130 | 61 | [2] 45.91 | .... |
| Montgomery | 5,198 | .... | .... | 24,314 | 24,314 | .... | .... | .... | .... | .... | .... |
| Selma | 2,805 | 1,092 | .... | 21,017 | 18,801 | 3 | 160 | .... | .... | [2] 78.30 | .... |
| Tuscaloosa | 1,936 | 348 | 225 | 3,800 | 3,789 | 2 | 158 | .... | .... | .... | .... |
| 1897–98: | | | | | | | | | | | |
| Birmingham | 9,275 | .... | .... | [3] 6,771 | .... | .... | .... | .... | .... | .... | .... |
| Decatur | 829 | .... | .... | [3] 605 | .... | .... | .... | .... | .... | .... | .... |
| Eufaula | 1,550 | .... | .... | [3] 1,132 | .... | .... | .... | .... | .... | .... | .... |
| Huntsville | 2,290 | .... | .... | [3] 1,672 | .... | .... | .... | .... | .... | .... | .... |
| Mobile (County) | 24,043 | 6,450 | .... | [3] 17,451 | .... | 101 | 158 | 135 | 52 | [2] 48.39 | .... |
| Montgomery | 5,207 | .... | .... | [3] 3,801 | .... | .... | .... | .... | .... | .... | .... |
| Selma | 3,393 | .... | .... | [3] 2,477 | .... | .... | .... | .... | .... | .... | .... |
| Tuscaloosa | 2,098 | .... | .... | 1,532 | .... | .... | .... | .... | .... | .... | .... |
| 1902–3: | | | | | | | | | | | |
| Anniston | 5,335 | 859 | 550 | [3] 8,060 | 9,590 | 3 | .... | .... | .... | [2] 50.00 | .... |
| Birmingham | 11,009 | .... | .... | [3] 19,051 | .... | .... | .... | .... | .... | .... | .... |
| Decatur | 921 | .... | .... | [3] 1,497 | .... | .... | .... | .... | .... | .... | .... |
| Eufaula | 1,793 | 653 | 470 | [3] 2,596 | 7,186 | 3 | .... | .... | .... | [2] 45.00 | .... |
| Florence | 2,231 | .... | 972 | [3] 3,086 | 6,219 | 3 | .... | .... | .... | [2] 40.00 | .... |
| Huntsville | 2,561 | 801 | 611 | [3] 3,855 | .... | 2 | .... | .... | .... | [2] 35.00 | .... |
| Mobile (County) | 20,276 | 7,848 | 6,338 | [3] 25,720 | .... | 111 | [4] 158 | 159 | 59 | [2] 50.00 | .... |
| Montgomery | 5,312 | 2,861 | 2,462 | [3] 9,553 | .... | 10 | .... | .... | .... | [2] 62.00 | .... |
| Selma | 4,318 | .... | .... | [3] 5,965 | 38,866 | .... | .... | .... | .... | .... | .... |
| Tuscaloosa | 2,320 | 715 | 468 | [3] 3,654 | .... | .... | .... | .... | .... | .... | .... |
| 1906–7: [5] | | | | | | | | | | | |
| Anniston | 4,680 | 1,527 | 1,090 | 18,947 | 18,942 | 6 | .... | .... | .... | [2] 62.24 | .... |
| Birmingham | 13,858 | 7,322 | 5,129 | 105,573 | 105,366 | 13 | .... | .... | .... | [2] 75.64 | .... |
| Decatur | 1,416 | 645 | 396 | 6,917 | 6,516 | 2 | .... | .... | .... | [2] 56.11 | .... |
| Eufaula | 1,887 | 624 | 459 | 7,291 | 7,023 | 3 | .... | .... | .... | [2] 63.08 | .... |
| Florence | 2,054 | 902 | 628 | 6,980 | 6,980 | 4 | .... | .... | .... | [2] 47.42 | .... |
| Huntsville | 2,440 | 1,154 | 809 | 8,127 | 8,127 | 3 | .... | .... | .... | [2] 59.00 | .... |
| Mobile (County)[6] | 21,821 | 10,676 | .... | 172,885 | 161,094 | 122 | .... | 192 | 56 | [7] 109.00 | .... |
| Montgomery | 9,820 | 4,650 | 3,380 | 61,329 | 61,294 | 14 | .... | .... | .... | .... | .... |
| Selma | 4,336 | 1,265 | 1,037 | 29,073 | 15,263 | 3 | .... | .... | .... | .... | .... |
| Tuscaloosa | 2,943 | 1,114 | 726 | 13,974 | 13,421 | 3 | .... | .... | .... | .... | .... |
| 1912–13: [8] | | | | | | | | | | | |
| Anniston | .... | 1,615 | 1,189 | 24,383 | 24,191 | 7 | 177 | 29 | 7 | [7] 125.40 | $102,000 |
| Birmingham | 43,659 | 25,320 | 17,833 | 511,766 | 511,766 | 62 | 176 | 486 | 123 | [7] 153.60 | 1,686,037 |
| Decatur | .... | 695 | 502 | 8,512 | 8,164 | 2 | 180 | 10 | 5 | [7] 166.66 | 32,500 |
| Eufaula | .... | 723 | 530 | 8,300 | 8,300 | 3 | 180 | 10 | 4 | [7] 150.00 | 18,500 |
| Florence | 2,141 | 922 | 627 | 11,379 | 11,049 | 4 | 180 | 19 | 3 | [7] 146.66 | 27,500 |
| Huntsville | 2,200 | 1,197 | 728 | 17,021 | 16,997 | 4 | 180 | 17 | 11 | [7] 140.66 | 50,000 |
| Mobile (City) | .... | 4,639 | 4,088 | 107,969 | 107,969 | 14 | 174 | 119 | 33 | [7] 157.00 | 424,500 |
| Montgomery | 9,504 | 4,934 | 3,561 | 93,652 | 92,124 | 14 | 180 | 73 | 35 | [7] 195.22 | 533,275 |
| Selma | 3,404 | 1,553 | 1,146 | 37,173 | 31,559 | 5 | 180 | 24 | 9 | [7] 181.89 | 109,000 |
| Tuscaloosa | 3,498 | 1,497 | 878 | 34,727 | 33,916 | 5 | 176 | 28 | 10 | [7] 159.00 | 101,200 |

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[1] Figures for 1892–93 not available.
[2] White teachers, per month.
[3] From State funds only.
[4] For white schools.
[5] Figures for 1907–8 not available.
[6] For 1907–8.
[7] White male teachers only.
[8] Includes high schools.

## III. NEGRO SCHOOLS.

The organization of the public schools for negroes is closely connected with the history of the corresponding white schools.

Before the Civil War there were in the South no schools, as such, for negroes, but it would be a mistake to assume that negroes received no education. They did receive an educational training which was excellent in character, extensive in amount, and suited to their condition of life. They were sometimes taught to read, write, and cipher;

but they were particularly taught to shoe a horse, to weave cloth, and make clothes for themselves, to build houses, and to work along similar lines. Their training, beyond the rudiments—and these were most often absent—was strictly industrial and of the very sort to make them most self-sustaining and independent when the end of the war brought freedom and the necessity of self-dependence. It seems perfectly safe to say that of all the property accumulated by this race since the war, the greater part is traceable directly to the industrial training which they had received in the days of slavery. It is also worthy of note that the best educational thought of to-day, not among white educators only, but among leading negro educators as well, is that this industrial education is what the negro needs for his best development. The presidents of the negro normal schools in Alabama—W. B. Paterson, William H. Council, and Booker T. Washington—have all held conspicuously to this view.

With the coming of the Federal armies into Alabama came the Federal school-teacher. He—more generally and correctly speaking, she—was filled with enthusiasm for the slave, but ignorance of the situation made many of these teachers think that the prevailing forms of education were all that was needed to accomplish the impossible and set the former slave on the seat of equality with the former master. For this reason institutions of the orthodox type, where Latin, Greek, and higher mathematics were offered to the ex-slaves in lieu of the homely training needed to make them and their children masters of the economic situation in which they found themselves, sprang up over the State under the direction of missionary societies and the Freedmen's Bureau. It would be unjust to say that these schools produced no good results, but at best the amount of good work actually accomplished is small when compared with the results that might have been obtained had they been started in the right direction.

In the meantime the natural leaders of Alabama were not blind to the situation created by the collapse of the Confederacy and the freeing of the slaves. Already there has been given a long list of leaders—natives and ex-Confederates—who, immediately after the war, advocated the education of the negro. The board of education of the city of Mobile had actually begun its work of educating the negro before reconstruction was old enough to act. In June, 1868, it had four public schools for negro children, with an attendance of 919, and a fifth school was organized during the autumn of that year.

The negro schools, first organized as private philanthropy and financed by the Freedmen's Bureau or through contributions from the North, passed into the State public school system soon after its reorganization in the summer of 1868. Under a working arrangement with those interested, the schoolhouses then in use and the teachers then employed became a part of the new system. The whole was administered as an integral part of the public schools and experienced about the same fortunes as those of the whites. This means that, while there was great clamor raised from time to time on their behalf, they were not entirely exempt from the difficulties which confronted all the schools of reconstruction times. Since 1875 they have been on a safer and surer basis and have had a development not essentially unlike the schools for the whites. Funds are now distributed to the counties on the basis of school population; in so far as the State distribution to the counties is concerned, there is no distinction between races.

The statistics for negro schools, so far as they can be differentiated in the public school reports, are presented with the other tables at the end of this bulletin.

As we have seen, suitable and proper efforts were made during reconstruction to establish normal schools for negro teachers, and later came a series of teachers' institutes for the same purpose. Perhaps more attention was given to this phase of negro education than to any other, but there was still the tendency to evolve along the old orthodox lines. According to the State superintendent in 1876, for instance, the Normal School at Marion, successor to the Lincoln Memorial University there, was "so liberally endowed by the State and furnished with a competent faculty as to afford to the colored race opportunities for acquirement of collegiate and university education." This statement is substantiated by the subjects taught there in 1879–80: Orthography, reading, writing, arithmetic, geography, grammar, history, botany, drawing, composition, vocal music, physiology, zoology, rhetoric, algebra, geometry, physics, Latin, Greek, chemistry, and French. The next year they had added: Penmanship, physical geography, trigonometry, geology, logic, English literature, school economy, and philosophy of education.

Within the next four years, however, this school, under the direction of William B. Paterson, began to develop the industrial feature of its work, and progress was made in that direction, but it was thought desirable to keep this institution more closely to normal and higher educational lines, and on February 25, 1887, an act was passed[1] which provided for the removal of the Marion Normal to Montgomery and its reestablishment as the State Normal School and University for the Colored Race. It was conducted under these new auspices during the year 1887–88, and reached an enrollment of 358. With the second year it was organized into normal, preparatory, and industrial departments, and there was an enrollment of 500, but "no students presented themselves of sufficient attainments to profit by a college or university course of study."

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[1] Laws of 1886–87, p. 198.

The law under which the school had been removed and reorganized was challenged, however, and came before the courts in the case of Elsberry *v.* Seay (83 Alabama Reports, 614). It was pronounced unconstitutional because it failed to make the school subject to the official supervision of the State superintendent. The court declared, further, that since the new institution was not in the commonly accepted sense a part of the public school system, the money "set apart and appropriated from the school fund for the education of the colored people" for its support was "an unauthorized perversion of the funds from their own proper use," and therefore again unconstitutional.

As a result of this decision the school received for the year 1887–88, in addition to $500 from the Peabody fund, only $2,500 of the $7,500 provided for its support by the State under the law of 1887, and during the year 1888–89 apparently received nothing at all from that source, although still conducted at Montgomery. A new law, passed February 23, 1889, again reorganized "the State Normal School and University for Colored Students, now at Marion, Perry County," as the State Normal School for Colored Students. It was again located at Montgomery, and since then has had a more or less uniform development along normal and industrial lines. It is now receiving $16,000 per year from the State, and is more distinctly a State institution than either of the others, as practically all its funds are of local origin.

The other institution for negroes, which has its roots in the period of reconstruction and has evolved into a useful institution of the present day, is the normal school located at Huntsville, which is now known as the Huntsville State Colored Normal and Industrial School, with its post office at Normal, Ala. It began industrial work about 1884 and remained legally a simple normal school until the act of February 13, 1891, became a law. In accord with this act, the Morrill fund was divided between the white and colored citizens in the proportion of 56.6 per cent to the white Alabama Polytechnic Institute at Auburn and 43.4 per cent to the colored institution at Huntsville. William H. Council was then at the head of the latter institution and remained as such until his death. Under Mr. Council's direction the school did for the negroes of Alabama not only normal work, but also work along agricultural, mechanical, and industrial lines, and between the work at Normal and that at Tuskegee, Alabama has now a position of unrivaled leadership in negro education in the South. The detailed statistics of growth of these institutions by five-year periods will be found in the section on normal schools.

It is worthy of note also that the original act under which Tuskegee was established had only a normal school of the orthodox type in mind. The act of February 10, 1881, provided for "a normal school for the education of colored teachers," for the use of which $2,000 was set aside out of the funds coming to the colored children.

This school was opened July 4, 1881, with 30 pupils. The courses as then offered were strictly preparatory and normal, but the trustees had brought to the school as principal a young teacher from Hampton Institute who was destined to help change the educational direction of the race and so bring it back toward the standard of antebellum training from which it was drifting. This young teacher was Booker T. Washington. "From the first we have striven to make this a normal and industrial school," says the superintendent in his third report, and development went on regularly on these lines till 1893 (February 21), when a supplementary act was passed which broadened the scope of the institute to "the instruction of colored teachers and youth in the various common academic and collegiate branches, the best methods of teaching the same, the best method of theoretical and practical industry in their application to agriculture and the mechanical arts." This act made the Tuskegee trustees an independent, self-perpetuating body, with large administrative powers. The State contribution to their work was raised to $3,000, and is now $4,500.

Since that time, under the administration of Mr. Washington, the school has had a remarkable development. Its funds have been greatly increased by contributions from the Peabody and Slater funds, from the General Education Board, by money gifts from private individuals, and by public lands from the United States. At the present time the value of its plant equipment and its annual income are greater than those of any other institution in the State.

## IV. RURAL SCHOOLHOUSES, RURAL SUPERVISION AND SCHOOL-IMPROVEMENT ASSOCIATIONS.

The year 1907 will be marked in the history of Alabama public school education as one of the great years, for at that time the State took two steps forward by passing (Mar. 2, 1907) a State law for giving aid to rural schoolhouses, and at the special legislative session in the summer (Aug. 7) another law which laid the foundations for county high schools.

The schoolhouse law provided that $67,000 should be set apart annually out of the fund arising from the sale of fertilizer tags "for the purpose of aiding in the erection or the repairing of rural schoolhouses." Of this sum, $1,000 was for the use of each county. It was provided that none of it could be used in any incorporated place. The school district must raise in advance not less than $100, and when this had been done there was contributed out of the special fund provided by the State for the county not more than the sum raised by the district and in no case more than $200. It was required that these houses be erected on grounds of not less than 2 acres in extent and that they be deeded to the State.[1]

The result was instantaneous; from all over the State came reports of developing interest in schoolhouses. Many new ones were erected by means of this State aid; old ones were repaired, and in many cases, patrons and school officials being unwilling to surrender title to the property, erected new houses or enlarged and improved old ones out of private means. In some counties the number built or repaired by private means was as large as that from public funds.

The statistics on this subject for the last eight years, beginning with the year before the schoolhouse law was enacted and coming down to the present time, speak most eloquently of progress.

The total number of rural communities thus aided in 1910–11 was 1,293; in 1911–12 it was 1,393, and the total number was then 6,157. One aspect of this matter, however, is not so pleasing; by an examination of the report for 1910–11, it will be seen that while most of the counties had gladly made use of their appropriations, others had used little or none of this fund. On October 1, 1911, 2 counties had more than $4,000 each to their credit; 4 had more than $3,000; 9 more than $2,000, and 16 more than $1,000. Of those counties, Mobile was prevented from acting by legal technicalities; the others "taken as a whole * * * present about the poorest showing in the way of suitable rural school buildings of any counties in Alabama." Such was the judgment of the superintendent in 1910–11. According to the report for 1911–12, the same tendency seems to have been accentuated in those counties rather than ameliorated. The counties thus "slow to take advantage of the provisions of this law" lie mainly within what is known in the State as the black belt.

> With few exceptions these same counties have not levied the 1-mill county school tax. Having grown out of the habit of helping themselves in supporting their own schools, these counties are somewhat slow in spending their own money in order to receive the State's assistance in erecting better-built school buildings.

It may be that while they own the larger part of the unexpended surplus derived from the State, they are unable in some localities to raise the necessary local funds to meet the State requirements. On this point the superintendent says in 1911–12:

> Very little money up to this time has been recommended by the county boards for use in either building or repairing schoolhouses for negroes. It is pleasing, however, to note an apparent disposition on the part of county boards to place this State aid in the future in a larger measure for the benefit of the negro schools. In the black-belt counties, where a large part of this fund remains unexpended, the schoolhouses are among the poorest in the State, except in the villages. The better class of negroes will not much longer be content to keep their families on these black-belt farms unless the county boards make provisions through the privileges of this law to let the State aid those negro communities for the education of their children.

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[1] Law of Mar. 3, 1907, p. 174.

The report for 1912–13 shows that 326 schoolhouses received aid from the State to the amount of $51,402. They were located in 63 counties, and only 4 counties reported no money spent for schoolhouses. "According to the reports of the several counties, however, there is yet a large number of rural schoolhouses uncomfortable, unfurnished, and wholly unsuited for use."

In 1913–14 the sum of $74,521 was expended in 65 counties.

The growing influence of the law may be shown in a general way by the following statistics of values:

*Value of public school property.*

| Years. | Value public schoolhouses. | | | Value school furniture. | | | Number schoolhouses uncomfortable in winter. | | |
|---|---|---|---|---|---|---|---|---|---|
| | White. | Negro. | Total. | White. | Negro. | Total. | White. | Negro. | Total. |
| 1906–7 | $1,831,462 | $144,240 | $1,975,702 | ........ | ........ | ........ | ........ | ........ | 901 |
| 1907–8 [1] | 4,003,599 | 303,310 | 4,306,809 | ........ | ........ | ........ | 885 | 741 | 1,626 |
| 1908–9 | 4,217,045 | 374,835 | 4,591,880 | 459,142 | 74,095 | 533,237 | 688 | 654 | 1,342 |
| 1909–10 | 5,198,075 | 432,710 | 5,630,785 | 581,705 | 86,515 | 668,220 | 720 | 781 | 1,501 |
| 1910–11 | 6,149,413 | 533,033 | 6,682,446 | 516,303 | 70,349 | 586,652 | 665 | 563 | 1,228 |
| 1911–12 | 6,475,771 | 589,548 | 7,065,319 | 547,357 | 59,438 | 606,795 | 481 | 561 | 1,042 |
| 1912–13 | 6,584,452 | 608,334 | 7,192,786 | 624,322 | 69,388 | 693,710 | ........ | ........ | ........ |
| 1913–14 | 7,008,536 | 666,850 | 7,675,386 | 674,059 | 67,846 | 741,906 | ........ | ........ | ........ |

[1] First year under new law.

Another matter which has contributed to the advancement of the public rural schools, by separating and individualizing their work, was the appointment of a rural school supervisor, an officer whose expenses are borne by the Peabody educational fund. The choice of the State superintendent for this important position fell upon N. R. Baker, who made his first report for the school year 1911–12. His time was devoted almost entirely to four phases of the problem: Grading, closer supervision, the articulation of the various grades one with another, and vitalization of school work.

He reports that some 60 per cent of the rural schools had been graded up to October 1, 1911, and he thought that by October 1, 1913, 90 per cent would have been graded, this opinion being based upon "actual observation and inquiry among teachers, and the estimates of many county superintendents," and it was said "nearly all counties are now using the uniform course of study suggested by the State department of education." When we turn to the last report of Mr. Baker, that dated November 17, 1913, we find that among other matters promising, in the opinion of the supervisor, to advance the interests of the country schools, besides grading, are improvement of the teaching force, more rural supervision, encouragement of school fairs and libraries, reading circles, consolidation, better sanitation, night lectures, and the issue of "diplomas" to schools possessing certain requirements of equipment, administration, and vitalizing agencies.

The work of Mr. Baker has been confined to supervision of white rural schools. In 1913 the general education board made provision for a State supervisor of negro schools. Mr. James L. Sibley was appointed, and entered upon his work in March, 1913. The latest report shows 1,918 rural negro schools in the State, of which 1,783 are one-room schools. "The crying need of these schools is supervision," says the supervisor, who then continues:

> Nearly 50 per cent of the county superintendents reported last year that they did not visit a single negro school. * * * It is almost impossible for a superintendent to visit all of his white and colored schools. * * * What those superintendents need is competent assistants to help them in this work of supervision. * * * Every county superintendent who has a number of negro schools in his county should have a colored assistant to help in the work of supervision. * * * It would pay every county board to employ such a person, preferably a colored woman, with industrial training, to assist the county superintendent. In about 100 counties of the Southern States this past year there were employed, out of the Jeanes fund, colored teachers to act as assistants to the county superintendents, and to stress industrial work. Alabama had 16 of these working in 17 counties.

He then proposed that the counties employ, as they were allowed to do under the law in effect October 1, 1913, such supervisors out of their own funds.

> Experience has shown that, on the whole, women make better supervising industrial teachers than men, owing to their ability to reach the homes of the children. It is recommended that these women be employed for 12 months during the year, devoting their time in the winter months to the schools while they are in session, and to canning clubs, corn clubs, and community work in the summer.

It was thought the negroes themselves would be able to pay $100 to $150 on the salary of such supervising teacher and that the county should pay from one-half to two-thirds of the whole. Few Government reports are more inspiring than this of Mr. Sibley. After discussing teachers' institutes and farm demonstration work with some detail, he concludes:

> The kind of education the negro needs is that which will react on his home. In fact, that is the kind all classes need. Women should know how to make and care for a home. Men should be able to provide for one and maintain it. To do this efficiently, both men and women need moral, intellectual, and vocational training.

In September, 1914, Mr. Baker became assistant superintendent of schools in Jefferson County. He was succeeded by Prof. J. B. Hobdy, and under a new arrangement all of the rural school work, both white and black, will be inspected by both supervisors. Of no less importance than the supervisory work carried on under the auspices of the Peabody fund and the General Education Board is the administration of the law of April 18, 1911, which provides that county superintendents may be employed on full time and placed on a salary instead of a percentage basis. A recent decision of the supreme court upholds the constitutionality of the law, and it became fully operative for the first time in 1913–14.[1] Thirty-nine counties now have paid supervisors who devote their whole time to the work. The result is that many schools which were formerly visited seldom are now visited regularly. In 1912–13 there were 2,640 visits paid to white schools and 544 to negro schools; in 1913–14 the numbers were 6,528 and 1,329. An immediate result of this supervision has been a closer grading. In 1912–13 there were 3,226 graded white schools and 1,040 graded negro schools; in 1913–14 the numbers were 4,331 and 1,497. Since the total number of city and rural schools in the State is given as 6,753, we may assume that 925, or 13.7 per cent, are still ungraded. Of the teachers in these schools, 857 white and 117 negro hold life certificates; 1,515 and 29 hold first-grade certificates; 2,689 and 510, second grade; 2,256 and 1,754, third grade.

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[1] See Alabama reports.

No phase of the rural school work has been of more value perhaps than that undertaken by the School Improvement Association, a voluntary organization of women first begun about 1905. This has now spread into nearly every section of the State and has enlisted the special and direct attention of parents and others in the work of the schools, as was not the case in earlier years. It raised and expended in 1913–14 the sum of $86,928 in the physical betterment of white public schoolhouses and grounds, an increase of 27 per cent over the former year, and $7,603 for colored schools, an increase of 78 per cent. The influence of the movement has been far wider than the mere money raised. It has awakened in many sections a sort of proprietary interest in the schools. It has gained a local support which in turn "has worked wonders in many communities in the improved appearances and in the added comfort of the schoolhouses and the grounds about them, together with equipment in desks and other necessary furnishings." It has made its influence felt in legislation and has assisted in the development of rural libraries for children, and in some sections has gone still further, in organizing rural lyceums for the older people. It promises, in fact, to be a real and safe beginning to the problem of the socialization of rural communities which, by reason of isolation, have long suffered from an excess of individualism. Not only has the School Improvement Association organized the forces for the school, but it has kept them organized for the home and the summer vacations, for out of its activities have come, in part at least, such supplemental courses in industrial and vocational training as are represented by corn clubs, tomato and canning clubs, pig and poultry clubs, health clubs, domestic-science and domestic-art clubs, and similar organizations. These have added practicability to the school work, given to its members the power which comes from doing, and developed a new source of income from the proceeds of these activities.[1]

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[1] See interesting reports of the work of the school improvement association in the proceedings of the Alabama Educational Association for 1908, 170–193; 1909, 231–247; 1910, 269–287; 1911, 165–172, etc.

## V. RURAL SCHOOL LIBRARIES AND LIBRARY ORGANIZATIONS.

Perhaps no law which has for its object the intellectual advancement of the people has accomplished more within the time than the rural-libraries law enacted by the legislature in 1911.

The movement of which this library law is a development seems to have come out of the Alabama Library Association, organized in 1904, and of which Dr. Thomas M. Owen has been continuously president. It holds annual meetings, discusses the popular and professional side of library work, and seeks to develop all phases of the public library.

Through its influence the legislature in 1907 revised and extended the duties of the department of State archives and history and made it in all but name a State library commission. It provided that the department shall assist—

> in the establishment of public and school libraries and in the improvement and strengthening of those already in existence; it shall give advice and provide assistance to libraries and library workers in library administration, methods, and economy; and it shall conduct a system of traveling libraries.

Then came the Alabama Teachers' Reading Circle, organized in 1909 for the purpose of encouraging general and professional reading among the teachers of the State. In 1910 it changed its name and widened its scope so as to admit the young people of the State to the advantages of its leadership, and the school library law of 1911, proposed by Supt. Willingham and pushed through the legislature because of his initiative was a natural and necessary evolution.

This law, passed April 13, 1911, and applicable only to communities of less than 1,000 inhabitants, provided that $6,700 for the State[1]—$100 for each county—should be devoted to library purposes. It was to be appropriated by the proper county courts in sums of $10 to such school districts as should raise $10 for a similar purpose. To these sums the county was to add $10 more, and the whole sum of $30 was to be devoted to "the purpose of establishing, maintaining, enlarging, or improving public libraries in rural, village, or town schools." This law was probably copied from a similar one in force in North Carolina, but it is a patent improvement on its prototype for the reason that it makes these sums available annually.

The passage of the law awakened remarkable interest in the subject throughout the State and its results were quickly manifest.

The report for 1910–11 showed 468 public school libraries for whites and 47 for negro pupils. They had 83,152 and 3,723 volumes, respectively, and were worth $66,615 and $2,060. In 1913–14 these figures had risen to 1,418 and 55 libraries, with 171,288 and 3,044 volumes and valued at $107,273 and $2,040. Says Supt. Willingham:

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[1] Made available March 15, 1912.

> No legislation on the statute books is apparently doing more good in its operation for the money expended. * * * The prospects for the current year in the execution of this library law are highly promising. A large majority of country boys and girls have but little opportunity of broadening their vision through travel, while many of the homes of these youth are not plentifully supplied with valuable and attractive literature. * * * During the year closed there were 3,048 teachers studying systematically the books selected for the Teachers' Reading Circles. This was an increase of about 1,000 over the number of teachers thus following a course of self-improvement during the preceding year. Teachers who themselves read systematically include, for the most part, those who foster and encourage systematic reading on the part of their pupils.

In 1912 the superintendent published an Alabama library list of 1,600 books, carefully prepared and annotated by Dr. Thomas M. Owen, director of the department of archives and history. It was revised and extended by him and republished in 1913, and is intended to serve as a basis for the purchase of school collections and—

> to anticipate the growing aspiration of the several communities which will avail themselves of the provisions of the law, as well as to afford a list for teachers, high-school libraries, small public libraries, and others.

That this progressive action on the part of the State will have good effect on the larger libraries is shown by a recent announcement that the library board of Birmingham is now (1914) entering upon a campaign to raise a fund of approximately $50,000 to be used in the purchase of such new books as will bring the city library system up to modern standards.[1]

### VI. THE DISTRICT AGRICULTURAL SCHOOLS.

These schools, the beginning of whose organization dates from about 1888, seem to have been the least successful of the State's efforts. And yet the very things which caused their comparative failure pointed out in the most emphatic way the needs of the State at that time, but the legislature failed to read the lesson aright or to interpret it at all, for the time of awakening had not yet come. The purpose of the legislature in creating them was to make them centers for agricultural education. They were the forerunners of the present development of education along the lines of agriculture, industrial, and vocational training. In this respect the legislature was ahead of the people, but the latter knew well enough what they wanted. They took these agricultural institutions and developed them into high schools of the classical type. These schools had made themselves sufficiently felt to be mentioned in the superintendent's report in 1892–1894. The oldest was that for the eighth district and was—

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[1] See Library Journal, December, 1913, and January, 1914.

> pleasantly situated in one of the prettiest groves within the corporate limits of the classic city of Athens. * * * The college building is a handsome two-story brick, and the main building for the boarding department is a splendid two-story structure, in which the president and his family live with the boarding pupils, giving it more the appearance of a large family than of a boarding school. * * * The school has now, besides the regular college course, departments of music, art, and elocution. The military feature is used as a means of discipline.

The school at Albertville (seventh district), established in 1892–93 and opened in 1894, was similar in character. It reported four departments—primary, intermediate, preparatory, and collegiate. It, too, had provision for elocution, art, and music, but none for agriculture.

The school at Evergreen (second district), also established in 1892–93 and opened in 1894, was known as the Southwest Alabama Agricultural School and Experiment Station. The administrators in control of this school alone seem to have had an idea of the real purpose of the organization. It was located on a farm of 50 acres, and the "definite and well-defined object" which it had in view was to found a school—

> where young men who expect to become farmers may be taught the fundamental principles of scientific agriculture * * * and where tests of the analyses of soils and fertilizers may be made, and where experiments may be conducted in the growth of grains, fruits, vegetables, vines, grasses, and in dairy making and stock raising. * * * This school, while denominated agricultural, is not strictly so, as all the other sciences, together with the classics, music, art, and a normal or training department, will be included in its curriculum, and its doors are open to both sexes and pupils of all grades.

These schools evidently made an honest effort to comply with the purpose of the legislature. They failed, but yet their evolution into this type is perfectly logical. The people made them serve what they felt was at that time their greatest need, irrespective of mere name. They changed them from delocalized institutions intended to serve a whole congressional district to purely local ones with a local patronage and organized them to suit their own needs, for in 1900–1901 the total patronage of the schools reached 2,243, divided as follows: College, 881; preparatory, 363; primary, 999.

This development caused dissatisfaction, and a law of 1903 sought to restore them to their original purpose by putting the whole under a single board of control, to which was added for service in connection with that particular school a number of local trustees.

Being thus delocalized they went back to their original plan and have been developing since along their original lines. Says the superintendent in 1911–12:

> The course of study * * * has been made more practical in that the subject of agriculture appears to be emphasized more strongly than at any time in the history of these schools. A few of them, however, seem to be having some difficulty in impressing the fact of their usefulness upon the minds of the public, who are not

> responding with that patronage which it seems these schools should draw. There is no sort of doubt that every one * * * has a most important function to perform in the teaching of practical scientific agriculture.

In response to this feeling of dissatisfaction there has been a formal effort to bring them still nearer to the original purpose for which they were organized. Says the superintendent in the 1912–13 report:

> Last summer at the close of the year's work the board of control of these schools reorganized completely the course of study, with a view to making agriculture and agricultural instruction both in theory and practice the paramount consideration for every student connected with these institutions. Whatever criticism the public may have made of these district schools was based upon the theory that they were not doing the full amount of agricultural work intended by the law establishing them. The board believes that the complete reorganization of the course of study upon which these schools have entered for the year now begun will remove all basis for reasonable complaint of this kind.

The statistics of these schools may be presented as follows from the superintendent's reports. It is not till 1892–1894 that they became of sufficient importance to attract the attention of the superintendent, and the material available is at best incomplete and variable in character.

*Statistics of the district agricultural schools.*

| Item. | 1892–94 | 1896–97 | 1897–98 | 1898–99 | 1899–1900 [1] | 1900–1901 | 1901–2 | 1902–3 | 1903–4 | 1904–5 | 1905–6 | 1906–7 | 1907–8 | 1908–9 | 1909–10 | 1910–11 | 1911–12 | 1912–13 | 1913–14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of schools.... | 3 | 7 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| Number of pupils.... | 616 | 1,929 | 2,111 | 2,268 | 1,855 | 2,243 | 2,131 | 2,311 | 2,355 | [2] 1,405 | 1,811 | 2,695 | 2,469 | 1,214 | 1,271 | 1,402 | 1,443 | 1,477 | 1,449 |
| Total income from State.............. | [3] $4,885 | $35,072 | $43,890 | $41,194 | $26,397 | $43,898 | $39,147 | $39,799 | $38,069 | [4] $34,745 | $40,154 | [2] $49,600 | $66,417 | $57,061 | $56,100 | $56,365 | $92,284 | $69,268 | $67,613 |
| Total disbursements.. | [3] $4,624 | $32,202 | $38,376 | $42,068 | $23,959 | $43,056 | $39,356 | $35,373 | $42,068 | [4] $33,266 | $39,940 | [2] $45,993 | $67,796 | $54,858 | $57,798 | $55,331 | $85,617 | $62,392 | $61,858 |
| Value of property .... | ....... | $73,000 | $130,000 | ....... | ....... | $109,500 | $134,330 | $142,725 | $132,365 | [2] $111,400 | $172,825 | $199,015 | $209,330 | $224,250 | $213,800 | ....... | $195,100 | $212,975 | $205,000 |
| Number of teachers... | ....... | ....... | ....... | 53 | ....... | 52 | 49 | 58 | 98 | ....... | 42 | 55 | 59 | 41 | 39 | 47 | ....... | ....... | 49 |
| Number of high-school pupils............ | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... | 882 | ....... | 1,202 | ....... | ....... | ....... | ....... | ....... | 1,082 | 1,101 | 1,082 |
| Number of preparatory pupils......... | ....... | ....... | ....... | ....... | ....... | 363 | 553 | 1,080 | 625 | ....... | ....... | ....... | ....... | ....... | ....... | ....... | 361 | 376 | 367 |
| Number of primary pupils............. | ....... | ....... | ....... | ....... | ....... | 999 | 667 | 830 | 848 | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... |
| Number of college pupils.............. | ....... | ....... | ....... | ....... | ....... | 881 | 820 | 67 | ....... | [2] 1,070 | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... |
| Number studying agriculture........... | ....... | ....... | ....... | ....... | ....... | 1,008 | 715 | 802 | 972 | 939 | 1,180 | 1,088 | 1,239 | 1,154 | 1,078 | 966 | ....... | ....... | ....... |
| Volumes in library... | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... | 5,580 | 4,663 | 6,150 | 6,280 |
| Value of library..... | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... | ....... | $4,250 | $4,425 | $4,250 | $5,400 |

[1] Figures incomplete.

[2] Of eight schools.

[3] For one school only; no report for 1894–96.

[4] Of seven schools.

## VII. INDUSTRIAL EDUCATION.

Agricultural education brings us naturally to our next subject—industrial education in primary and secondary schools. The training of defectives dates back to 1852, although no successful work was done until 1858, when the Alabama Deaf and Dumb Asylum was organized. It survived the shock of war, and about 1869 a department for the blind was added. This training was of necessity largely industrial in character.

In 1872 the A. & M. College, now known as the Alabama Polytechnic Institute, was organized and offered instruction along industrial lines to such young white men as had already made some educational progress. Then, in the eighties, came the Marion, Huntsville, and Tuskegee schools, which offered to negro boys and girls such industrial training as they were prepared to follow to advantage. Then the organization of agricultural schools was intended to carry this training further down the line and give it to those white boys who were not able or not prepared to profit by college courses, so that before 1890 every class of youth in Alabama, including the defectives, had had some line of industrial training open to them except the white girls of the State. For them nothing was available except the teachers' courses in the normal schools. To call attention to this situation was to inaugurate a movement for a change.

On January 1, 1895, an act went into effect which created an Industrial School for White Girls. The act provided a board of trustees consisting of the governor, the superintendent of education, the auditor, one from each congressional district and two from the State at large. In this school girls were to be educated "in industrial and scientific branches" and might acquire there—

> a thorough normal-school education, together with a knowledge of kindergarten instruction and music; also a knowledge of telegraphy, stenography, photography, and phonography, typewriting, printing, bookkeeping, in-door carpentry, electrical construction, clay modeling, architectural and mechanical drawing, sewing, dressmaking, millinery, cooking, laundry, house, sign and fresco painting, home nursing, plumbing, and such other practical industries as from time to time to them may be suggested by experience or tend to promote the general object of * * * fitting and preparing such girls for the practical industries of the age.

The sum of $5,000 was appropriated for the first year; $10,000 for the second; $15,000 each for 1897 and 1898. The school was located at Montevallo, in Shelby County, and was opened October 12, 1896. The enrollment the first year was 227, divided into five courses, known as normal, business, industrial arts, domestic science, and college courses. In 1897–98 the enrollment was 368, with 38 graduates. There were then 21 teachers, and while the total appropriation to that date amounted to $45,000, property had been accumulated worth $46,279. In 1899–1900 the attendance was 400, and it was said that the institution had reached the limit of its capacity in the accommodation of pupils. The school term was now lengthened to eight months and a dairy farm was established. In 1906 the State superintendent said that the usefulness of the institution was being retarded by lack of buildings and equipment, but that it was placing a secondary education within the reach of many girls who would otherwise be unable to secure it and that it was "teaching useful industries by which the girls may make a living should necessity require it." While this school, like most others, has not had a career of uninterrupted development, its course has been generally upward. It has widened its vision, extended its courses, and increased its requirements, and as it has thus extended its purview it has passed further and further from the scope of the present study. Its widening ambition is voiced in the change of name in 1911 from the Girls Industrial School to the Alabama Girls' Technical Institute, the purpose now being evidently to do for the secondary and higher education of women what the Alabama Polytechnic Institute at Auburn is doing for men. This wider horizon is reflected in its statistics for 1912–13. It had 525 pupils, with 39 instructors. It enjoyed a total income of $116,811, of which $56,506 was principally from the endowment of funds given the institution by the Federal Government and $36,000 was from the State. It had a library of 5,900 volumes, and its total equipment was valued at $593,500. In 1913–14 the library contained 6,000 volumes and 2,000 pamphlets and was valued at $6,000. The report for 1910–11 says that:

> Former pupils of this school are meeting with the highest success in all the walks of life open to women. The training they receive here specially prepares them for teaching, and hundreds of them are filling positions in the public and private schools. * * * Technical courses are now being introduced in many of the public schools, and this will increase the demand for teachers trained in this school. Many former students are taking high rank in various industrial pursuits as bookkeepers, stenographers, milliners, dressmakers, nurses, florists, etc. The crowning work of the school, however, is the splendid preparations for home life.

Within the last few years other institutions, some for boys, others for girls, have come to the front and are making themselves felt in the widening educational field. One of these is the coeducational Northeast Alabama Agricultural and Industrial Institute, located at Lineville, Clay County, which for the year 1912–13 reports 596 pupils, half of them in the elementary grades. It offers courses in normal training and domestic science; has property worth $34,260, and had an income for the year of $7,896, of which $3,000 came from the State.

Another institution giving industrial training is the Alabama (White) Boys Industrial School, East Lake, near Birmingham. This institution is essentially reformatory in character, and grew out of a private enterprise subventioned by the State. In 1901–2 it received $15,000 for the two years; 1903–1906 this sum was increased to $8,000 per year; during the next quadrennium it reached $20,000 per year, and in 1911 the sum was made elastic and fixed at $150 per pupil. In 1912–13 it had 291 pupils and enjoyed an income of $45,400, of which $43,200 came from the State. Its property is valued at $126,000. Efforts to interest the State in a similar institution for girls failed to meet with approval in 1907.[1]

The Alabama School for Deaf and Blind offers classes in manual training, and in 1912–13 enjoyed an income of $80,559, practically all of which was from the State.

It will be noted that these schools, and the district agricultural schools as well, offer their courses mainly to secondary pupils, but the tendency is more and more clearly marked to introduce the elements of agriculture and industrial work into the grades, and thus correlate more closely the work of the schools with the actual duties of life.

## VIII. THE COUNTY HIGH SCHOOLS.

Up to the year 1907 the history of public high schools in Alabama had not been different from what it was in other Southern States. There were no public high schools except as attempts had been made to evolve them here and there as a part of the school system of various cities. There had been and were then successful high schools in operation in the State, but they were private or denominational. The pupil who lived in the country or in any except a few of the larger towns must secure his high-school training from private institutions. In fact, as late as 1886 the Alabama Educational Association was still discussing how far the State should aid "high schools, normal schools, and colleges." The right of the State to do this was denied by at least one speaker, who makes a bitter attack on such State aid, being evidently inspired to take this view by the private school interests, which had a practical monopoly of the country and were comparatively well organized. On the other hand, the public high school system, even in the towns and cities, was disjointed and fragmentary. There was little official connection and little correlation between the State-supported public school at the bottom and the State-supported university at the top of the educational system. Each part was independent of and received little or no help from the other.

But the University of Alabama, then under the presidency of John W. Abercrombie, saw the necessity of bridging the chasm between the primary schools and the higher institutions. How could it do this without money? President Abercrombie was fortunately able to interest the authorities of the General Education Board, who agreed to furnish the university with the necessary funds for a professorship of secondary education. When the position was filled the choice fell on Mr. Joel C. Du Bose, who, in 1905, nominally as an associate professor of secondary education in the university, in reality as an advance agent for the institution, took the field in an effort to inaugurate a movement looking to a system of State high schools. Mr. Du Bose spent two years[1] traveling over the State, visiting many schools in many localities and preaching the doctrine of a more extended school system. This had its due effect, and the assembly on August 7, 1907,[2] passed a law which laid the foundation for a high school in each county.

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[1] See Laws, 1907, p. 185.

Under the high-school law of 1907 a high-school commission, consisting of the governor, auditor, and superintendent of education, was appointed to locate one high school in each county. The counties were required to furnish 5 acres of land, on which they were to erect a building worth not less than $5,000. The whole was to be deeded to the State. These schools were to be under the control of the county board of education; rules and regulations for the government and employment of teachers were placed in the hands of the high-school commission. The teachers in these high schools were required to have a first-grade or life certificate, and all matriculates were to pass "a satisfactory examination in the branches of free public instruction in the elementary schools." A matriculation fee of $2.50 might be charged. For the years 1908–9 and 1909–10 the schools received from the State $2,000 each. Beginning with July 1, 1911, this amount was increased to $3,000.

The result of this law was that a keen rivalry sprang up among the various towns and villages for the purpose of securing these schools. Some localities were disappointed in their ambition, but they erected houses and organized high schools in spite of their failure to secure State funds. In this way also the towns were enabled to differentiate and extend their high-school departments, and the demand for State funds and for county high schools was more than the State could supply.

*Statistics of county high schools.*

| Item. | 1908–9 | 1909–10 | 1910–11 | 1911–12 | 1912–13 | 1913–14 |
|---|---|---|---|---|---|---|
| Number of county high schools | 22 | 33 | 33 | 42 | 50 | 53 |
| Value of property | $316,500 | $419,024 | $438,792 | $554,637 | $686,574 | $709,086 |
| Number of teachers | 49 | 79 | 108 | 155 | 182 | 174 |
| Number of students | 1,160 | 1,816 | 3,041 | 3,787 | 4,570 | 4,996 |
| Number of boarding students | 408 | 601 | 1,047 | 1,359 | 1,725 | 1,968 |
| Number in average attendance | 840 | 1,019 | 2,028 | 2,294 | 3,484 | 3,933 |
| State appropriation | $42,000 | $60,500 | $70,250 | $119,000 | $152,000 | $152,000 |
| Town appropriation | $5,820 | $5,424 | $5,693 | $4,457 | $2,604 | $4,440 |
| County board of education appropriation | $1,100 | $7,875 | $13,199 | $11,005 | $9,833 | $15,634 |
| Miscellaneous sources | $1,774 | $7,907 | $11,979 | $19,986 | $29,922 | $39,850 |
| Total income | $50,694 | $81,707 | $104,347 | $158,641 | $197,540 | $211,924 |
| Total paid teachers | $45,666 | $70,006 | $88,007 | $126,444 | $159,359 | $166,229 |
| Total expenses | .......... | $78,362 | $99,641 | $148,565 | $190,083 | $206,552 |
| Total volumes in libraries | .......... | .......... | 6,946 | 7,975 | 11,030 | 13,028 |
| Length of term in days | .......... | .......... | .......... | 180 | 180 | 180 |

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[1] He resigned Oct. 1, 1907.

[2] See Revised Code of 1907.

It will be noted that there are included in the number of matriculates in some schools a number of seventh-grade pupils. This is a provision made by law to meet the needs of pupils in certain counties whose primary schools have not as yet risen to the requisite standard, and it did much to popularize these schools with the masses.

As high-school salaries go in the Southern States the pay of the principals in these county high schools has been very good. Only one county paid less than $1,100 in 1912–13, while 23 paid $1,500; Houston County paid $1,575; Marengo, $1,855; and Bibb, $2,000. The total amount of income varies from $3,200 in Cleburne to $8,078 in Dale (1912–13).

With the organization of these high schools, it has been possible to bridge over the chasm which formerly existed between the public schools and the university. They maintain a full four-year high-school course, and with their development and growth the whole scheme of education will be complete. Candidates for college can now in most counties secure the necessary preparation within reasonable distance of their homes.

The patronage, when analyzed, shows that as yet, and as might be expected, about two pupils are from the home locality to every one coming from a distance. But the field of patronage is widening, and that the schools are growing in general favor is illustrated when we note that the 32 schools organized in 1909–10 then had 1,816 pupils and that the same schools had in 1912–13 3,015 pupils.

Careful courses of study[1] have been worked out for these schools which are "directed toward giving each student as far as possible a suitable training for the duties and responsibilities of good citizenship." For this reason they are made thoroughly practical and at the same time fit their graduates, of which there were 299 in 1913, "to meet fully all the college entrance requirements."

Prof. James S. Thomas, of the department of secondary education in the University of Alabama on the foundation established by the General Education Board, has been appointed State inspector for the county, town, and city high schools. There has been associated with him in this work Prof. J. R. Rutland as representative of the Alabama Polytechnic Institute. The value of their services is evident. They make weekly or monthly reports to the university and the State superintendent on the actual conditions; the course of study is made uniform, and the constant visits of the inspectors enable the State through its high-school commission to maintain a common standard as to the quality of the instruction given.

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[1] Published in 1910.

## Chapter XII.

## LOOKING FROM THE PAST AND INTO THE FUTURE.

Just 60 years ago the State of Alabama made its first formal essay toward a State-supported and State-administered public-school system. During this period there have been many ups and downs of educational fortune, but there has been progress. What, in brief, have been the main characteristics of the educational experience of 60 years?

The public-school system of Alabama is based primarily on the grant by Congress of the sixteenth sections to the State for educational purposes. These sections were granted to the people of the respective townships, although it has been judicially decided that the title vested in the State for the benefit of these townships.

The grant did not mean that a great educational fund was established in the State, to be administered by the State as a unit, directed, controlled, and used by it under such conditions as would best promote public education as a whole. It did mean that there were potentialities present in the shape of wild lands which in time, under good management, might be developed and converted into such a fund. The Federal Government furnished the raw material out of which this educational fund was to come. The people of Alabama through their assembly were expected to furnish the machinery and the men by whom these results were to be attained. But the people of Alabama of that day were pioneers and State builders; they were neither financiers nor educationists. As a result the blunders that resulted might have been predicted in part at least.

First of all, it was necessary to sell the best of these lands and invest the proceeds so as to lay the foundations for productive income. The infant State was under the practical necessity of creating a circulating medium, and the line of investment that promised a circulating medium and an income on the fund at the same time was through the State bank, established with branches in various sections of the State. During the thirties speculation was rife all over the Union. Fortunes were quickly and easily made in Alabama as elsewhere. All available school funds seem to have gone into the State bank, and so great were its earnings that it was found possible in 1836 to abolish State taxation and to rely on the State bank to meet the expenses of government. In 1839, since prosperity was still continuing, the assembly went still further and required the State bank to contribute $150,000 annually to the support of a public-school system as yet unorganized. In 1840 the annual requirement was raised to $200,000. This sum may be regarded in part as an annual and just interest on the public-school fund invested in the State bank as a part of its capital stock and in part as a participation of the school system along with other departments of the State government in the amazing, if temporary, success of one of its subordinate activities.

The situation in 1839 was therefore anomalous; by a series of fortunate investments—speculations we might almost say—the State suddenly found itself in possession of an annual income of from $150,000 to $200,000 for exclusive use in the promotion of an educational system which had never yet been organized and of which those in authority knew practically nothing. In this dilemma, caused by the absence of knowledge and of organization, the State seems to have been content to distribute such funds as came into its hands among such private and denominational schools as then existed in the State. The funds thus distributed seem to have been only complementary to those coming from private sources, and no controlling and directing interest was asserted by the State or recognized by the recipients. The net result seems to have been that by this use of the public funds they were practically dissipated, and so contributed little or nothing to the evolution of a public-school system. The only permanent gain was the knowledge, based on experience, that the public-school system must be organized with the State, not the individual, as the predominant partner.

To this failure in administration was now added a still more serious misfortune in the practical loss of the principal of the sixteenth section funds with the failure of the State bank.

Perhaps the most natural result of this experience of a generation was an inevitable association in the public mind of the idea of public schools and sixteenth section funds. The former seemed to depend entirely on the latter. They were supported out of its income and without such income they were not even considered. The idea of the public school was that of an institution with an independent source of support coming to the people from without, not from within. To the people of Alabama the public school was at that time not an evolution, it was an importation, supported by a fund of outside origin. It is possible that this fact will explain in part the conservatism of the people even to-day in the matter of allowing local taxes for the support of the system, and it may be that the loss of the principal of the sixteenth section fund with the failure of the State bank and the resulting necessity of raising the annual interest out of taxes instead was not an unmixed evil. It certainly tended to arouse the people to a realization that the system was their own, whatever it was. It made the success or failure of the system now vital and personal to every man who thought. The wasting of a Federal gift might be venial, but the wasting of State taxes was mortal.

It is evident that to the middle-of-the-century aristocratic slaveholder of Alabama few things could be more foreign than the idea of public taxation for schools. He had been educated in a private, denominational, or endowed institution. He had paid for the instruction received. He was both willing and able to pay for the education of his own children, and for these reasons he was willing to let the public-school fund go for the education of those less financially able. He would subscribe to the public school fōr his own children and allow the public money to go to the poorer members of society, for to him the public money, even if raised by taxation on himself and his peers, savored of the outside, of Federal influence and of centralization, terms all hateful to men who were sufficient unto themselves and who lived and ruled within their own domain. By mere contrast with this point of view, to the poor man the State bounty came to savor of public charity; in his individual pride he characterized the public system as a pauper system, whose service an exaggerated and undue self-respect frequently forbade him to accept. The slaveholder probably did not, as a rule, emphasize the charity idea; he rather waived his right as a matter of generosity to the less fortunate. It was the poor man, not his wealthy neighbor, who characterized the public schools as a pauper system.

Again, the question of public schools involved the still larger question of an extension of State activities and a further centralization of power. The people of the State were strict constructionists of the theory of Federal power, and what applied to the United States Government applied almost equally as well to the State government. Decentralization was the watchword, and the nearer this reached the individual the better. The very theory of a State-supported and State-controlled system of public education was foreign to the ideas of the rank and file of the men of that day. That this is true is made evident by a perusal of the public utterances of the leaders of the time. For years they had urged that such steps be taken by the State, but the people were exceedingly slow to advance in that direction, as their legislative proceedings will show. The reasons for this slowness are based perhaps as much on a strict interpretation of the constitution as on indifference.

The total result of the first generation of dealing with sixteenth section lands and public schools may be summed up in a single word—experience. The people had experimented in administering the sixteenth section lands, also in investing the funds derived from these lands, and had lost. They had sold their best lands, they had invested the money in stock of the State bank, and the bank had failed. The net result was that what was intended as a productive fund for certain townships, became, in the form of a paper fund, a charge on all, the interest on which, if paid, would come in due proportion from the counties least able to bear and go in part to those most able to do without, and all this because of the initial mistake of the grant being made to the township and not to the State.

The two elements of progress that seem to have come out of the situation are the evident effort of the State to make an equitable distribution of the fund according to needs rather than the strict letter of ownership and, through the necessity of raising the income of the sixteenth section fund by taxation, a familiarization of the people with this method of securing all school funds.

The sole capital then with which the State began its public-school system was a stock of knowledge gained through a generation of hard knocks in the school of experience, something less than a million acres of land of problematical value, and a paper fund amounting to more than $1,000,000.

From the first formal organization of the system (1854) all of the public-school funds were raised by taxation, but, coming indirectly and partly as a gift from the State, the people were slow to grasp the idea that they were themselves the ultimate source of this income.

After the school system was finally established in 1854, and its sources of income fixed by law, the question of administration reverted to the older idea of schools without supervision. The people seemed willing enough to spend for schools whatever money was available, but they were not often willing that any of this should be spent either for State or county supervision. The idea seems to have been that the public-school system when once organized was amply able to execute itself. This indicates clearly that the people had not yet been liberated from the memory of earlier days when public funds were merely supplementary to private funds and when the schools were essentially private institutions, with some additional income derived from public endowment or its equivalent. The situation was now exactly reversed. The schools were essentially public; they were supported in the main by public funds, which were, however, for many years increased in amount by fees for tuition and incidentals, and from various other sources. These additional sums in the earlier days were sometimes as much as one-half of the whole, and even in recent years have not been inconsiderable, yet the time has never been, since 1854, when there was the slightest inclination on the part of the State to loosen its hold on the schools or to return to the system of the forties. Supervision won its battle before the Civil War, and since has grown steadily in importance and influence.

During the seven years between 1854 and 1861 the schools were steadily developing and gaining a hold on the people. They were becoming better understood, their resources were increasing somewhat, and they were widening the scope of their activities. There can be no doubt that during these years the system took a lasting hold on the affections of the people of the State. This is indicated by the tenacity with which it held its own during the war and the period immediately following. It is clear that had there been no reconstruction, the schools would have continued developing along the original lines. Their field would have been soon broadened and extended so as to include the negro, and with the recuperation that would have followed with years of peace they would have soon recovered the ground lost during the time of war and outdistanced the best days of the ante bellum period.

But this was not to be. Reconstruction added to the burdens of the white population and worked a hardship upon the negroes, because it carried in its train the hostility of the whites among whom they lived and who were at heart their friends. It meant that the energy which for the next years would have been spent in developing the schools and in building up again the waste places of the State must now be spent in wresting the scepter of government from the hands of the negro and his political allies. In this life and death struggle all else was forgotten. Without autonomy, education was dead. No wonder there was little progress in those eight wretched years. The real wonder is that, when this proud people had again come into their own politically, they so easily and quickly forgot the evils that had been grafted on their system of public schools during the reconstruction period, and after revising and revivifying the new system retained all the good which it had evolved. It seems literally true that the public-school system of Alabama, organized in ante bellum days, conducted during the period of actual hostilities, and maintained so far as available funds would permit through the next three years, gained nothing by its reorganization in 1868. It was not placed in the hands of the men who were best fitted to administer it, either by previous experience, ability, or character. It was too often the prey of the ignorant and the spoilsmen. The nadir of misfortune was reached in 1873, when the schools were practically closed because extravagance, carelessness, and ignorance had already piled upon them a load which they could no longer bear. The tide now turned; and out of the slough of despond, under the leadership of a brave, broad-minded man, a new organization was to rise, an organization for which, whether good or bad, Alabamians alone are responsible and through which they are still seeking to solve the great question of universal education.

After the adoption of the constitution of 1875, and the reorganization of schools which followed it, the permanent existence of the public-school system as one of the regular activities of government was assured. This constitution provided that $100,000 a year be devoted to the schools; what came to them beyond this sum depended on the general prosperity of the State and the will of the assembly. It is possible that the idea in mind of the constitution makers was that the system contained too many elements of usefulness to be left to the mere will of the assembly. For this reason it was given a formal lease of life by the organic law, with enough income to assure its continuance. Beyond this, expansion could come only as the system appeared to the people to be making good. In truth it must be said that almost another generation passed before it really began to make good.

There were many reasons for this comparative failure—the presence of a different race and a certain amount of inequality in the distribution of funds was one cause; indifference, ignorance, lack of funds, short terms, poor teachers, and poor results were other causes; nor is it worth while to veil the fact that the administration of the department was a matter of politics. Most of the early superintendents were made the party nominee for religious, economic, or social reasons, or as a matter of political expediency. Sometimes there was in the superintendent little of the spirit or enthusiasm of the real teacher or educational missionary who was willing to go into the corners of the State in season or out of season and preach the doctrine of educational salvation. Then, too, with a single exception, during the last 40 years the superintendent has been changed every four years or oftener. Since the adoption of the constitution of 1875 there have been in all 11 individuals who have filled or finished 12 terms of office and this rotation in office is now fixed by the constitution itself. The result is that there can not be the highest degree of continuity in development, for as soon as a superintendent begins to learn the details of his office and so to become master of the situation he must give place to another. He can have no assurance that his plans will be carried out by his successor, and knowing that no amount of success will help him succeed himself, he is under constant temptation to accept other positions before his term of service is over. This has already twice been the case since 1901, when this new constitutional provision went into force.

In earlier days the interests of the schools were not always the main consideration when party nominations were made; partisan politics rather than education sometimes dictated, and it has been by a long and laborious mental process that the people have come to a realization that their educational system is something more than a mere department of government charged with duties that concern the present. The administration of Maj. Palmer helped to this realization. His success was in part because he had a longer term in which to carry out his plans; he had more funds than his predecessors; he also assisted the cities to realize their needs and urged them along lines of self-help. They were beginning to feel the imperative necessity for more funds; they now began seeking for the means of supplying the need. Unincorporated communities were shut out by the Cullman case—Schultes *v.* Eberly. The Birmingham decision in 1895 cut off income from another class of taxes, but this process of exclusion revealed to them that these funds might be raised on a general city levy and then appropriated in accord with specific enactment to the use of schools. About 1895 the same thing was tried with the counties. They were careful to keep within the constitutional limit of 75 cents on the $100, but found it possible, through special legislative enactment, to appropriate a part of the funds raised under a general levy to school purposes. Through the development of this idea in the counties it was possible to secure the State-wide act of 1899, which required the counties to make a straight levy of 10 cents per hundred for schools. This levy kept within the total tax limit, but it is not at all certain that it would have passed the test of the courts. The friends of the measure were relieved from anxiety, however, by the constitution of 1901, which adopted the idea, extended it from 10 cents to 30 cents, and made it a part of the organic law. The author of the act of 1899 was John W. Abercrombie, then superintendent. It was through his efforts that it passed the assembly. The light was breaking. The men in charge of the educational department were now practical educators, and while the new constitution did not reflect their full hopes and wishes, it did show the presence of their influence. It was in reality a compromise between the progressive proeducational interests which demanded the fullest rights of local and State taxation and the old conservative and vested interests which wanted little taxation or none at all. The new 30-cent tax for education was levied by the State, collected by the counties, paid to the State, and by it again distributed to the counties. The constitution also made possible an optional county tax of 10 cents on the $100, but the right of local taxation was still denied to both cities and local school districts, and since then these have become the centers around which the struggle for further progress has been carried on.

The limited success attained through the constitution of 1901 was by no means accidental or exotic. On the other hand, it had its root deep in the soil of other years and is a product of the faithful work of a few men and women in various walks of life—teachers, school officers, superintendents, and others. Through their efforts such development came as was possible with the limited funds available. Their efforts, their words and actions, made possible the development of that day and paved the way for the constitutional amendment of 1901.

With the new sources of income now at command, the schools began to make a great leap forward, especially in the length of term, in the funds available per child of school age, and in school equipment. With the increase of funds has come also a widening of school activities. This includes the reorganization of the special school district system and its extension to the whole State; the reorganization of the district agricultural schools; the organization of high schools; the increased efficiency of the normal schools; the evolution of the Montevallo Girls' Industrial School into a high-grade technical institute for women; the extension of the work of the university and of the Alabama Polytechnic Institute. All along the line has educational endeavor been awakened and reinforced and reinvigorated. There is now almost everywhere a better and closer supervision, a keener and more general interest in the educational progress of all classes of the population. All phases of educational work, from the primary grades to the university, have been encouraged, inspired, and strengthened.

In no way can this general progress be illustrated better than by comparing the statistics of illiteracy in Alabama in 1880 with those in 1910, as follows:

*Total number of illiterates 10 years of age and over.*

| | |
|---|---|
| 1880 | 433,447, or 50.9 per cent. |
| 1890 | 438,535, or 41.0 per cent. |
| 1900 | 443,590, or 34.0 per cent. |
| 1910 | 352,710, or 22.9 per cent. |

*Native white illiterates 10 years of age and over.*

| | |
|---|---|
| 1880 | 111,040, or 25.0 per cent. |
| 1890 | 106,235, or 18.4 per cent. |
| 1900 | 103,570, or 14.8 per cent. |
| 1910 | 84,768, or 9.9 per cent. |

*Foreign white illiterates 10 years of age and over.*

| | |
|---|---|
| 1880 | 727, or 7.7 per cent. |
| 1890 | 1,100, or 7.9 per cent. |
| 1900 | 1,313, or 9.3 per cent. |
| 1910 | 2,063, or 11.3 per cent. |

*Negro illiterates 10 years of age and over.*

| | |
|---|---|
| 1880 | 321,680, or 80.6 per cent. |
| 1890 | 330,700, or 69.1 per cent. |
| 1900 | 338,707, or 57.4 per cent. |
| 1910 | 265,628, or 40.1 per cent. |

*Illiterates 10 to 20 years of age, inclusive.*

| | |
|---|---|
| 1880 | 166,395, or 53.5 per cent. |
| 1890 | [1] 144,665, or 34.8 per cent. |
| 1900 | 133,584, or 28.0 per cent. |
| 1910 | 86,437, or 16.4 per cent. |

A study of these census figures will show that while there was a decrease, as measured by per cent of illiteracy in the 20 years between 1880 and 1900, in reality (1) the total number of illiterates increased by 10,000; (2) foreign illiterates increased by nearly 600; (3) negro illiterates increased by 17,000; (4) white native illiterates decreased by less than 8,000. This meant that while the relative amount of illiteracy was less in 1900 than in 1880, the possibility of its final eradication seemed at that time to be almost indefinitely postponed. The publication of these statistics no doubt had its influence in awakening the people of the State. They saw that their public-school system, although nearly half a century old, was not holding its own in the face of growing ignorance. They diagnosed the reason, and they had force of character to apply the proper remedy which, in the case of Alabama, meant mainly more money and equipment. The increase in the school funds shows clearly in the census returns of 1910: The total number of illiterates was reduced between 1900 and 1910 by 91,000; the native whites by 19,000; and negro illiterates by 73,000; and the per cent of illiterates between 10 and 20 years of age, as compared with 1890, was more than cut in half. But according to the State school census of 1914 the figures of to-day are not so satisfactory and give little comfort to those in authority. In discussing illiteracy and the school census of 1914, Supt. Feagin says, in his report for 1913–14:

> In the aggregate there are 306,857 white children in Alabama between the ages of 10 and 20, inclusive. Of this number, 280,598 are literate and 26,259 are illiterate. This means that 1 out of every 12, although he has had the opportunity of public education for three years or even more, is still unable to read and write. There are 240,814 colored children in the State between the ages of 10 and 20, inclusive, of whom 170,567 are literate and 70,247 are illiterate. This means that 1 negro in 4, between the aforesaid ages, can not read and write. For our combined population there are 547,671 children between the ages of 10 and 20, inclusive, and of this number 451,165 are literate and 96,506 are illiterate. * * * That conditions are gradually improving no one can deny, but if our number of illiterates decreases in future census decades by the number that it decreased in the last census decade it will require just 65 years to place Alabama and the people of Alabama where they ought to be when educational opportunity is equalized and utilized.

If, however, comparison is made between the situation in 1900–1901 and in 1913–14, it will be evident that substantial progress is being made:

The total number of teachers increased from 6,302 to 9,727.
School property from $934,065 to $8,417,291.
Special tax of 30 cents per hundred from $245,246 to $1,734,302.
City and county appropriations from $663,754 (in 1907–8) to $3,363,859.

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[1] Estimated.

The total available funds from $1,180,283 to $4,446,076.

Total available funds per capita of school population from $1.67 to $5.74.

Total expenditures from $1,119,397 to $4,274,458.

Length of school term for whites from 97 to 135 days; for negroes from 82.7 to 104 days.

Per cent of school population enrolled in 1900–1901 was 54.3; in 1913–14 it was 60.5.

The per cent of enrollment in average attendance was 46.9 in 1900–1901, and 61.6 in 1913–14.

The per cent of school population in average attendance was 25.4 and 37.2, respectively.

It does not seem that these phases of the school system, enrollment and attendance, are making progress equal to others. They represent one of the phases of the subject which is crying loudly for an improvement superinduced by law. It is safe to believe also that no such extensive gains are likely to be shown by the census of 1920 as are shown in 1910, for the reason that with the funds now available the public schools have about reached their zenith. Under most favorable conditions, with a given amount of money from year to year, only results of a corresponding grade can be expected. The results of the increased funds available under the constitution of 1901 are now reaching their flood tide; without more funds for expansion they will remain stationary for a time, and then will come necessarily a reaction and the beginning of the ebb. Educational leaders in the State have long grasped the situation and are now bending their energies toward securing legislative sanction for a constitutional amendment permitting local taxation. Such a provision was defeated by a small margin only in the legislature of 1911; no matter of more importance will come before the session of 1915. Defeat is unthinkable, for the people of Alabama are aroused; they are patriotic and it would mean a shock to educational development, an encouragement to illiteracy, a check on progress in general, a moving backward of the shadow on the dial of Ahaz.

With an increase of funds must go also other elements of progress to insure the best results. The most important of these is that of compulsory school attendance. Local taxation and compulsory attendance will doubtless open to the State a new era of educational prosperity. They are to-day vital necessities, and this study can perhaps be ended in no better way than by quoting the words of one of Alabama's educational leaders, who having served as State superintendent has now become president of the State Normal School at Florence. Mr. Henry J. Willingham says in the Educational Exchange for February, 1914:

> School attendance is required throughout the civilized world to-day, except in Russia, Spain, and Turkey, and six of the Southern States.[1] How much longer shall we * * * in Alabama be willing to say "Here we rest"? It is gratifying to observe that public sentiment seems to be crystallizing in the demand for a law upon our statute books on the subject of compulsory attendance. God speed the day when it may come.

This only is educational salvation.

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[1] Reduced to four in April, 1915.

# PUBLIC SCHOOL STATISTICS, 1850–1914.

TABLE 1.—*School population, teachers, property, and school year.*

| Years. | Totals, white and negro. | | | White only. | | Value all school property. | Negro. | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | School population. | Teachers. | Schools. | Monthly salary. | Days in school year. | | Teachers. | Schools. | Monthly salary. | Days in school year. |
| 1855 | [1] 145,518 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| 1856 | 171,073 | ...... | 2,281 | ...... | 120 | ...... | ...... | ...... | ...... | ...... |
| 1857 | 178,095 | ...... | 2,262 | ...... | 125 | ...... | ...... | ...... | ...... | ...... |
| 1858 | ...... | ...... | 2,597 | ...... | 122.5 | ...... | ...... | ...... | ...... | ...... |
| 1859 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| 1860 | ...... | [2] 2,038 | 1,903 | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| 1861–1868 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| 1868–69 | 357,181 | 2,902 | 2,824 | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| 1869–70 [3] | 387,057 | ...... | 1,845 | [4] $42.58 | 49 | ...... | ...... | 490 | $42.27 | 49 |
| 1871 [5] | 399,153 | 3,470 | 3,321 | [4] 42.60 | 66.5 | ...... | 973 | 922 | 43.06 | 64.3 |
| 1871–72 [6] | 403,735 | 2,650 | ...... | [4] 38.00 | 72 | ...... | 830 | ...... | 40.00 | 71 |
| 1872–73 | 404,739 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| 1873–74 | 405,839 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| 1874–75 | 406,270 | 3,961 | 3,898 | [4] 27.20 | 86 | ...... | 1,286 | 1,288 | ...... | 83 |
| 1875–76 [7] | ...... | ...... | 3,632 | ...... | 80 | ...... | ...... | 1,027 | ...... | ...... |
| 1876–77 | 369,447 | 4,225 | 4,175 | 22.50 | 81.5 | ...... | 1,439 | 1,415 | 22.74 | 77 |
| 1877–78 | 370,245 | 4,800 | 4,796 | ...... | 84.7 | ...... | 1,462 | 1,461 | ...... | 80 |
| 1878–79 | 376,649 | 4,675 | 4,671 | [4] 18.70 | 84 | ...... | 1,496 | 1,494 | 26.57 | 79 |
| 1879–80 | 387,769 | 4,615 | 4,597 | 20.96 | 80 | $130,067 | 1,521 | 1,512 | 23.62 | 67 |
| 1880–81 | 388,003 | 4,698 | 4,572 | [4] 23.06 | 80 | 285,976 | 1,645 | 1,591 | 23.15 | 76 |
| 1881–82 | 401,002 | 4,564 | 4,624 | [4] 21.70 | 79 | 264,457 | 1,508 | 1,566 | 21.88 | 78 |
| 1882–83 | 403,901 | 4,717 | 4,824 | [4] 22.40 | 80.2 | ...... | 1,569 | 1,655 | 22.10 | 79.3 |
| 1883–84 | 419,764 | 5,182 | 5,218 | 24.76 | 83 | ...... | 1,724 | 1,797 | 24.75 | 83 |
| 1884–85 | 420,413 | 5,392 | 5,391 | 23.76 | 82.4 | ...... | 1,827 | 1,744 | 22.78 | 83.1 |
| 1885–86 | 450,968 | 5,490 | 5,583 | 27.59 | [8] 87.2 | ...... | 1,829 | 1,925 | 25.97 | 87.2 |
| 1886–87 | 452,937 | 5,483 | 5,583 | [4] 21.87 | [9] 70.5 | ...... | 1,853 | 1,925 | 21.58 | 71 |
| 1887–88 | 485,551 | 5,593 | 5,702 | [4] 22.31 | 68.2 | ...... | 1,875 | 1,958 | 23.06 | 67.4 |
| 1888–89 | 485,025 | 5,916 | 6,009 | [4] 21.14 | 69.5 | ...... | 1,968 | 2,064 | 21.15 | 69.2 |
| 1889–90 | 522,691 | 6,143 | 6,308 | 22.04 | 67.7 | ...... | 2,070 | 2,174 | 21.06 | 68.9 |
| 1890–91 | 550,522 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| 1891–92 | 550,522 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| 1892–93 | 579,887 | 6,608 | 6,687 | ...... | 71 | ...... | 2,196 | 2,248 | ...... | 67.4 |
| 1893–94 | 579,887 | ...... | ...... | ...... | ...... | ...... | 2,288 | 2,294 | ...... | 65 |
| 1894–95 | 590,757 | 7,341 | 7,073 | 24.03 | 72.5 | ...... | 2,351 | 2,326 | 18.71 | 65.3 |
| 1895–96 | 590,757 | 7,388 | 7,011 | 23.96 | 72.5 | ...... | 2,484 | 2,411 | 18.29 | 63.8 |
| 1896–97 | 590,757 | 7,519 | 6,989 | 22.97 | 72 | ...... | 2,466 | 2,347 | 17.70 | 64.2 |
| 1897–98 | 590,757 | 7,591 | 7,231 | 24.09 | 72.8 | ...... | 2,503 | 2,455 | 18.44 | 63 |
| 1898–99 | 633,546 | 7,074 | 6,966 | 25.05 | 68 | ...... | 2,301 | 2,320 | 17.66 | 62 |
| 1899–1900 [10] | 634,061 | 6,063 | 3,742 | ...... | ...... | ...... | 1,857 | ...... | ...... | ...... |
| 1900–1901 | 661,911 | 6,302 | 6,199 | 32.25 | 97 | 934,065 | 1,886 | 1,962 | 22.59 | 82.7 |
| 1901–2 | 675,536 | 6,303 | 5,907 | 32.50 | 105.8 | 1,842,983 | 1,852 | 1,932 | 22.38 | 93 |
| 1902–3 | 649,374 | 6,029 | 6,028 | 33.00 | 102 | 1,622,178 | 1,791 | 1,777 | 22.79 | 93 |
| 1903–4 | 659,795 | 5,900 | 5,510 | 35.43 | 105 | 2,161,131 | 1,518 | 1,594 | 24.69 | 89.4 |
| 1904–5 | 679,051 | 5,716 | 4,036 | 40.18 | 108.2 | 2,780,022 | 1,417 | 1,468 | 23.43 | 92 |
| 1905–6 | 679,051 | 6,165 | 5,715 | 41.60 | 109.7 | 2,925,610 | 1,555 | 1,525 | 24.52 | 87.3 |
| 1906–7 | 688,634 | 6,519 | 6,020 | 43.75 | 112.8 | [10] 1,957,702 | 1,646 | 1,813 | 23.53 | 88.8 |
| 1907–8 | 687,274 | 7,759 | 5,870 | 48.52 | 123 | 4,306,809 | 2,019 | 1,669 | 25.07 | 95 |
| 1908–9 | 687,398 | 8,273 | 6,240 | 50.92 | 128 | 5,175,247 | 2,126 | 1,880 | 25.23 | 98 |
| 1909–10 | 712,769 | 8,677 | 6,389 | 51.60 | 131 | 6,416,420 | 2,243 | 1,965 | 26.53 | 90 |
| 1910–11 | 712,769 | 9,220 | 6,566 | 57.77 | 127 | 7,358,173 | 2,384 | 1,976 | 33.02 | 95 |
| 1911–12 | 727,297 | 9,442 | 6,572 | 54.50 | 132 | 7,672,114 | 2,344 | 1,937 | 33.35 | 96 |
| 1912–13 | 727,297 | 9,486 | 6,655 | 57.20 | 133 | 7,886,496 | 2,371 | 1,972 | 34.40 | 97 |
| 1913–14 | 774,976 | 10,038 | 6,753 | 58.34 | 135 | 8,427,291 | 2,516 | 2,026 | 30.70 | 104 |

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[1] School age in 1855, 5–18; in 1856 and 1857, 6–21; in 1868–69 to 1874–75 it was 5–21; beginning with 1875–76 it has since been 7–21.

[2] Census of 1860.

[3] For year Oct. 1, 1869, to Jan. 1, 1871.

[4] Pay of all teachers, white and black.

[5] For year Jan. 1 to Oct. 1, 1871.

[6] For year Oct. 1, 1871, to Sept. 30, 1872; 22 counties not reporting.

[7] 51 counties only reporting.

[8] Includes all schools, rural and special district.

[9] Includes country districts only.

[10] Reports incomplete.

TABLE 2.—*Enrollment and attendance.*

| Years. | Total school enrollment. | Per cent of total school population. | Average school attendance. | | | Negro. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Number. | Per cent of enrollment in average attendance. | Per cent of school population in average attendance. | School population. | School enrollment. | Per cent of school population enrolled. | Average school attendance. | Per cent of enrollment in average attendance. | Per cent of school population in average attendance. |
| 1855 | | | | | | | | | | | |
| 1856 | 89,160 | 52.1 | 38,265 | 42.9 | 22.4 | | | | | | |
| 1857 | 89,013 | 49.9 | 39,887 | 44.8 | 22.4 | | | | | | |
| 1858 | 98,274 | | 42,274 | | | | | | | | |
| 1859 | | | | | | | | | | | |
| 1860 | [1] 61,751 | | | | | | | | | | |
| 1861-68 | | | | | | | | | | | |
| 1868-69 | [2] 160,000 | 43.1 | | | | | | | | | |
| 1869-70 | | | 52,060 | | | 157,918 | | | 16,097 | | |
| 1871 | 141,312 | 35.4 | 107,666 | 76.2 | 26.9 | 164,671 | 54,336 | 33.0 | 41,308 | 76.0 | 25.1 |
| 1871-72 | 103,615 | 25.6 | 73,927 | 71.3 | 18.3 | | 41,673 | | 28,406 | | |
| 1872-73 | | | | | | 169,139 | | | | | |
| 1873-74 | | | | | | 172,506 | | | | | |
| 1874-75 | 145,797 | 35.9 | 110,253 | 75.6 | 27.1 | 172,537 | 54,595 | 31.5 | 43,229 | 79.2 | 25.0 |
| 1875-76 | 126,891 | | | | | | 48,716 | | | | |
| 1876-77 | 143,571 | 38.8 | 103,018 | 71.8 | 27.9 | 155,168 | 54,949 | 35.4 | 40,222 | 73.2 | 25.9 |
| 1877-78 | 160,713 | 43.4 | 99,125 | 61.1 | 26.7 | 155,525 | 63,914 | 41.6 | 41,659 | 65.2 | 26.7 |
| 1878-79 | 174,585 | 46.3 | 112,374 | 64.5 | 29.9 | 162,551 | 67,635 | 40.9 | 46,438 | 68.6 | 28.5 |
| 1879-80 | 179,490 | 46.3 | 117,978 | 65.7 | 30.4 | 170,449 | 72,007 | 42.2 | 50,184 | 69.4 | 29.4 |
| 1880-81 | 176,289 | 45.4 | 115,316 | 65.4 | 29.1 | 170,413 | 68,951 | 40.5 | 48,476 | 70.3 | 28.4 |
| 1881-82 | 177,428 | 44.2 | 114,527 | 64.5 | 28.5 | 176,538 | 69,479 | 39.3 | 47,146 | 67.8 | 26.7 |
| 1882-83 | 200,513 | 49.6 | 127,016 | 62.3 | 31.4 | 178,858 | 80,420 | 44.9 | 53,143 | 66.1 | 29.7 |
| 1883-84 | 215,578 | 51.4 | 134,410 | 62.4 | 32.1 | 186,209 | 84,065 | 45.1 | 55,595 | 63.7 | 29.8 |
| 1884-85 | 233,909 | 55.6 | 144,572 | 61.8 | 32.9 | 186,512 | 90,872 | 48.7 | 59,716 | 65.7 | 32.5 |
| 1885-86 | 252,871 | 56.0 | 152,776 | 60.4 | 33.9 | 201,331 | 104,150 | 51.7 | 62,673 | 60.1 | 31.1 |
| 1886-87 | 251,700 | 55.5 | 157,718 | 62.6 | 34.8 | 201,331 | 98,396 | 48.9 | 63,995 | 65.0 | 31.8 |
| 1887-88 | 258,590 | 53.3 | 165,099 | 63.9 | 34.0 | 212,821 | 98,919 | 46.5 | 66,424 | 67.1 | 31.2 |
| 1888-89 | 261,667 | 53.9 | 165,528 | 63.2 | 34.2 | 212,931 | 101,649 | 47.7 | 66,888 | 65.8 | 31.4 |
| 1889-90 | 292,052 | 55.9 | 175,168 | 59.6 | 33.5 | 226,925 | 111,648 | 49.2 | 69,507 | 62.2 | 30.6 |
| 1890-91 | | | | | | 240,894 | | | | | |
| 1891-92 | | | | | | | | | | | |
| 1892-93 | 306,014 | 52.9 | | | | 259,355 | 115,709 | 44.6 | | | |
| 1893-94 | | | | | | | | | | | |
| 1894-95 | 323,049 | 54.6 | | | | 268,113 | 118,689 | 44.2 | | | |
| 1895-96 | 331,557 | 56.1 | | | | | 124,618 | | | | |
| 1896-97 | 348,899 | 59.0 | | | | | 132,413 | | | | |
| 1897-98 | 341,638 | 57.8 | | | | | 129,955 | | | | |
| 1898-99 | 319,214 | 50.4 | | | | 282,879 | 122,915 | 43.4 | | | |
| 1899-1900 | [3] 215,693 | | | | | 282,733 | [3] 69,763 | | | | |
| 1900-1901 | 359,493 | 54.3 | 168,484 | 46.9 | 25.4 | 295,906 | 125,085 | 42.3 | 65,055 | 52.0 | 21.9 |
| 1901-2 | 365,816 | 54.2 | 188,269 | 51.4 | 27.8 | 301,496 | 126,116 | 41.8 | 68,573 | 54.3 | 22.7 |
| 1902-3 | 343,411 | 52.9 | 163,137 | 47.8 | 25.1 | 277,659 | 112,274 | 44.3 | 56,588 | 50.4 | 23.4 |
| 1903-4 | 339,726 | 51.5 | 208,364 | 61.3 | 31.7 | 302,834 | 117,690 | 38.8 | 64,992 | 55.2 | 21.4 |
| 1904-5 | 357,661 | 52.7 | 208,816 | 58.4 | 30.7 | 302,115 | 117,044 | 38.7 | 72,841 | 62.2 | 24.1 |
| 1905-6 | 382,821 | 56.3 | 245,441 | 64.1 | 36.1 | 302,115 | 120,989 | 42.0 | 74,987 | 59.0 | 24.8 |
| 1906-7 | 394,482 | 57.3 | 210,952 | | | 307,064 | 134,005 | 43.5 | [3] 75,297 | 56.2 | 24.5 |
| 1907-8 | 386,478 | 56.2 | 249,030 | 61.8 | 36.3 | 307,252 | 127,480 | 41.8 | 86,093 | 67.5 | 28.0 |
| 1908-9 | 405,226 | 58.9 | 264,448 | 65.2 | 38.5 | 305,938 | 133,316 | 43.5 | 87,730 | 65.3 | 28.7 |
| 1909-10 | 422,795 | 59.3 | 265,570 | 62.8 | 37.2 | 322,707 | 142,813 | 44.2 | 89,008 | 62.3 | 26.6 |
| 1910-11 | 431,707 | 60.6 | | | | 322,707 | 144,605 | 44.8 | | | |
| 1911-12 | 424,075 | 58.3 | 254,265 | 59.5 | 34.9 | 328,024 | 136,272 | 41.5 | 79,905 | 58.6 | 24.3 |
| 1912-13 | 428,625 | 58.9 | 259,768 | 60.6 | 35.7 | 328,024 | 134,870 | 41.1 | 82,871 | 61.4 | 28.3 |
| 1913-14 | 468,154 | 60.5 | 288,607 | 61.6 | 37.2 | 342,425 | 147,812 | 43.1 | 92,078 | 62.3 | 26.9 |

[1] Census of 1860.
[2] Estimated.
[3] Reports incomplete.

### TABLE 3.—*School revenues.*

| Years. | Invested funds: Sixteenth section funds and surplus revenue. | Miscellaneous, including balances. | State appropriations, special and general. | Poll tax. | Constitutional one-fifth mill special tax. | City and county appropriations. | Total. | Available funds per capita of school population. |
|---|---|---|---|---|---|---|---|---|
| 1850 | | | | | | | $103,640 | |
| 1851 | | | | | | | | |
| 1852 | | | | | | | 139,841 | |
| 1853 | | | | | | | | |
| 1854 | | | | | | | 237,515 | |
| 1855 | $135,981 | $1,534 | $100,000 | | | | | $1.63 |
| 1856 | 151,318 | 16,372 | 100,000 | | | | 267,690 | 1.56 |
| 1857 | 173,084 | 8,790 | 100,000 | | | | 281,874 | 1.58 |
| 1858 | 151,916 | 19,463 | 100,000 | | | | 280,253 | |
| 1859 | | | | | | | 275,965 | |
| 1860 | | | | | | | [1] 283,870 | |
| 1861 | | | | | | | [1] 283,870 | |
| 1862 | | | | | | | 231,774 | |
| 1863 | | | | | | | 268,731 | |
| 1864 | | | | | | | 233,978 | |
| 1865 [2] | | | | | | | 112,783 | |
| 1865–66 [3] | | | | | | | 413,849 | |
| 1866–67 | | | | | | | 290,250 | |
| 1867–68 | | | | | | | 45,411 | |
| 1868–69 [4] | 198,207 | 26,514 | 300,000 | | | | [5] 524,622 | 1.47 |
| 1869–70 [6] | 198,216 | 4,000 | 160,903 | | $137,290 | | 500,409 | 1.29 |
| 1871 [7] | 166,347 | | 100,000 | $82,580 | 232,462 | | 581,389 | 1.46 |
| 1871–72 | 199,680 | 2,000 | 54,276 | 113,505 | 235,525 | | 604,979 | 1.50 |
| 1872–73 | 200,123 | 14,000 | | 115,642 | 193,046 | | 522,811 | 1.29 |
| 1873–74 | 200,216 | 13,142 | | 80,487 | 180,502 | | 474,347 | 1.17 |
| 1874–75 | 200,510 | | | 73,817 | 209,887 | | 484,214 | 1.19 |
| 1875–76 | 100,427 | 2,050 | 150,000 | 96,414 | | | 348,891 | .85 |
| 1876–77 | 100,495 | 121 | 150,000 | 116,627 | | | 367,243 | .99 |
| 1877–78 | 137,425 | | 130,000 | 110,135 | | | 377,560 | 1.02 |
| 1878–79 | 137,578 | 518 | 130,000 | 120,125 | | | 388,215 | 1.04 |
| 1879–80 | 137,672 | 5,197 | 130,000 | 124,597 | [8] 60,145 | | 397,465 | 1.03 |
| 1880–81 | 138,013 | 1,253 | 130,000 | 128,212 | [8] 76,412 | | 397,479 | 1.03 |
| 1881–82 | 138,584 | 923 | 130,000 | 123,398 | [8] 66,990 | | 392,905 | .98 |
| 1882–83 | 139,409 | 11,864 | 130,000 | 136,733 | | | 418,006 | 1.03 |
| 1883–84 | 140,025 | 690 | 230,000 | 135,784 | [8] 23,186 | | [9] 506,499 | 1.21 |
| 1884–85 | 141,040 | [9] 2,490 | 230,000 | 138,010 | | | [9] 511,540 | 1.22 |
| 1885–86 | 141,348 | 3,920 | 230,000 | 148,085 | | | 523,353 | 1.17 |
| 1886–87 | 141,830 | 7,264 | 230,000 | [9] 136,896 | | | 515,990 | 1.14 |
| 1887–88 | 142,361 | 38,239 | 250,000 | 135,127 | [8] 174,183 | | [10] 566,460 | 1.17 |
| 1888–89 | 143,289 | 182,049 | 250,000 | 137,861 | [8] 184,359 | | 713,198 | 1.47 |
| 1889–90 | 143,938 | 53,538 | 350,000 | 151,222 | [8] 200,000 | | 698,698 | 1.34 |
| 1890–91 | 144,685 | 52,277 | 350,000 | 152,803 | | | 699,765 | 1.27 |
| 1891–92 | 145,110 | 57,018 | 350,000 | 146,545 | | | 698,672 | 1.27 |
| 1892–93 | 145,536 | 52,372 | 350,000 | 145,702 | | | 693,610 | 1.20 |
| 1893–94 | 145,885 | 166,635 | 350,000 | 143,751 | | | 806,271 | 1.40 |
| 1894–95 | 146,270 | 98,950 | 350,000 | 143,357 | | | 738,577 | 1.26 |
| 1895–96 | 145,000 | 168,888 | 350,000 | 145,235 | | | 809,124 | 1.37 |
| 1896–97 | 145,000 | 184,680 | 350,000 | 146,374 | | | 826,054 | 1.40 |
| 1897–98 | 145,000 | 168,794 | 350,000 | 153,448 | | | 817,242 | 1.39 |
| 1898–99 | [11] 145,000 | 57,584 | 450,000 | 150,416 | | | 803,000 | 1.27 |
| 1899–1900 | [11] 149,237 | 163,969 | 450,000 | 152,853 | | | 916,059 | 1.44 |
| 1900–1 | [11] 150,754 | 78,240 | 550,000 | 156,043 | [12] 245,246 | | 1,180,283 | 1.67 |
| 1901–2 | [11] 153,868 | 97,545 | 550,000 | 145,593 | [12] 257,129 | | 1,204,135 | 1.79 |

[1] Estimated.

[2] Income 1860–1865 from auditor's reports.

[3] Income 1865–1868 from superintendent's reports.

[4] Income 1868–69 to 1877–78 from superintendent's report for 1877–78, p. xxxviii.

[5] Auditor's figures begin.

[6] For 15 months, Oct. 1, 1869, to Jan. 1, 1871.

[7] For 9 months, Jan. 1 to Oct. 1, 1871. Since that date the fiscal year has run Oct. 1 to Sept. 30.

[8] Figures in this column, 1879–80 to and including 1889–90, are private contributions and not counted in auditor's report.

[9] Figures of superintendent; poll tax then a local matter and not reported to auditor.

[10] Income 1887–88 to date from auditor's reports. Prior to 1887–88 totals exceed auditor's by amount of poll tax. Prior to 1883 auditor gives only receipts of sixteenth section funds.

[11] The law of Feb. 23, 1899, and subsequent laws provided $165,000 to cover the total interest carried by these funds.

[12] From 1900–1901 the figures in this column are the special State tax of 10 cents on the hundred levied by the legislature of 1899 and the 30-cent tax provided by the constitution of 1901.

TABLE 3.—*School revenues*—Continued.

| Years. | Invested funds: Sixteenth section funds and surplus revenue. | Miscellaneous, including balances. | State appropriations, special and general. | Poll tax. | Constitutional one-fifth mill special tax. | City and county appropriations. | Total. | Available funds per capita of school population. |
|---|---|---|---|---|---|---|---|---|
| 1902–3 | [1] $154,406 | $89,151 | $550,000 | $100,893 | [2] $273,437 | | [3] $1,167,837 | $1.78 |
| 1903–4 | [1] 154,882 | 73,264 | 550,000 | 126,517 | [2] 281,211 | | 1,185,874 | 1.80 |
| 1904–5 | [1] 155,667 | 80,934 | | 89,811 | [2] 880,545 | | 1,206,957 | 1.78 |
| 1905–6 | [1] 156,496 | 85,098 | | 117,566 | [2] 927,423 | | 1,286,583 | 1.90 |
| 1906–7 | 157,653 | 60,766 | | 101,710 | [2] 982,334 | | 1,302,463 | 1.89 |
| 1907–8 | 158,256 | 51,203 | 300,000 | 124,443 | [2] 1,070,006 | [4] $663,754 | [5] 2,367,662<br>1,703,908 | 3.44 |
| 1908–9 | 159,192 | [6] 59,430 | 350,000 | 102,959 | [2] 1,282,818 | 508,243 | 2,562,642<br>1,954,399 | 3.73 |
| 1909–10 | 160,041 | [6] 51,411 | 350,000 | 245,112 | [2] 1,358,082 | 730,140 | 2,894,836<br>2,164,646 | 4.06 |
| 1910–11 | 160,232 | [6] 60,771 | 350,000 | 143,988 | [2] 1,399,371 | 1,604,951 | 3,719,313<br>2,114,362 | 5.22 |
| 1911–12 | 161,054 | [6] 57,235 | 350,000 | 179,096 | [2] 1,482,594 | 1,589,349 | 3,703,711<br>2,229,979 | 5.09 |
| 1912–13 | 162,024 | [6] 73,929 | 350,000 | 136,836 | [2] 1,565,472 | [7] 1,002,011 | [8] 4,304,571<br>2,288,262 | 5.92 |
| 1913–14 | 167,798 | ([6]) | 350,000 | 204,860 | [2] 1,734,302 | [9] 531,937 | [10] 4,446,076<br>2,434,662 | 5.74 |

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[1] The law of Feb. 23, 1899, and subsequent laws provided $165,000 to cover the total interest earned by these funds.

[2] From 1900–1901 the figures in this column are the special State tax of 10 cents on the hundred levied by the legislature of 1899 and the 30-cent tax provided by the constitution of 1901.

[3] These are the auditor's figures, which represent the sums passing through the State treasury. The superintendent reports for this year $1,289,399, which is equal to the sums reported by the auditor increased by local, city, and county funds which do not pass through the State treasury.

[4] This column stands for local funds contributed by cities and county funds raised by the special 10-cent county school tax.

[5] Top row gives superintendent's figures, found by adding to the auditor's total (bottom row), the local, county, and city contributions given in column 6. There are also included in the superintendent's total various miscellaneous sums like fees, supplements by patrons, etc.

[6] Not found in the auditor's report but made up by subtracting from his total the total of columns 1, 3, 4, 5. In 1913–14 the amount apportioned was less than the total of these columns.

[7] Superintendent's report, 1912–13, p. 147.

[8] Ibid., p. 144.

[9] City appropriations only.

[10] Superintendent's report, 1913–14, p. 119.

TABLE 4.—*School expenditures.*

| Years. | Total for white teachers. | Miscellaneous, including supervision and administration. | Normal schools. | Total for negro teachers. | Total expenditures, all purposes. | Balance on hand. |
|---|---|---|---|---|---|---|
| 1855 | | | | | [1] $146,825 | |
| 1856 | | | | | [2] 490,278 | |
| 1857 | | | | | [2] 552,984 | |
| 1858 | [3] $564,210 | | | | | |
| 1859 | | | | | | |
| 1860 | | | | | [2] 489,274 | |
| 1861 | | | | | [4] 283,870 | |
| 1862 | | | | | 231,774 | |
| 1863 | | | | | 268,731 | |
| 1864 | | | | | 233,978 | |
| 1865 | | | | | 112,783 | |
| 1865–66 | | | | | [5] 413,849 | |
| 1866–67 | | | | | [6] 290,250 | |

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[1] From treasury for all purposes.

[2] Includes local funds, not reported to auditor.

[3] This item is substantially like those for 1856 and 1857. Practically all expenditures of those days were for teaching.

[4] This was the amount reported to auditor.

[5] Amount apportioned, but not all was used for schools.

TABLE 4.—*School expenditures*—Continued.

| Years. | Total for white teachers. | Miscellaneous, including supervision and administration. | Normal schools. | Total for negro teachers. | Total expenditures, all purposes. | Balance on hand. |
|---|---|---|---|---|---|---|
| 1867–68 | | | | | [1] $44,773 | |
| 1868–69 | | $52,662 | $5,372 | | 502,156 | |
| 1869–70 | [1] $269,569 | 10,913 | 25,000 | [1] $194,927 | [1] 491,193 | $9,216 |
| 1871 | [1] 317,416 | 40,750 | | [1] 230,357 | [1] 588,523 | 2,082 |
| 1871–72 | 318,288 | 40,550 | 10,750 | 234,600 | 605,420 | 1,641 |
| 1872–73 | 271,420 | 37,050 | 9,750 | 202,812 | 521,032 | 3,420 |
| 1873–74 | 204,791 | 28,050 | 8,000 | 163,460 | 404,301 | 779 |
| 1874–75 | 282,390 | 30,587 | 10,000 | 207,102 | 530,079 | 2,605 |
| 1875–76 | 195,860 | 6,150 | 8,000 | 141,416 | 351,426 | 70 |
| 1876–77 | 228,817 | 7,582 | 10,000 | 159,864 | 396,266 | |
| 1877–78 | 204,581 | 6,077 | 10,000 | 148,423 | 369,080 | 141 |
| 1878–79 | 208,569 | 12,615 | 10,000 | 155,850 | 387,033 | 8,303 |
| 1879–80 | 203,681 | 12,048 | 13,500 | 158,913 | 388,141 | 9,325 |
| 1880–81 | 225,868 | 12,420 | 13,500 | 158,902 | [2] 410,690 | 427 |
| 1881–82 | 222,996 | 12,215 | 15,500 | 152,890 | [2] 403,602 | [2] 11,500 |
| 1882–83 | 252,740 | 12,860 | 15,500 | 167,398 | [2] 448,498 | [2] 690 |
| 1883–84 | 285,650 | 14,446 | 21,500 | 202,131 | [2] 522,727 | [2] 1,180 |
| 1884–85 | 298,260 | 14,691 | 21,500 | 204,499 | [2] 538,950 | |
| 1885–86 | 303,661 | 15,661 | 25,500 | 198,221 | [2] 543,044 | [3] 3,421 |
| 1886–87 | 291,884 | 15,555 | 25,500 | 194,380 | [2] 527,320 | [2] 585 |
| 1887–88 | 294,181 | 13,993 | 36,500 | 183,934 | [3] 385,159 | 181,301 |
| 1888–89 | 295,906 | 16,099 | 23,000 | 201,218 | 659,803 | 53,395 |
| 1889–90 | 323,737 | 15,866 | 36,500 | 208,180 | 648,135 | [4] 50,563 |
| 1890–91 | 330,896 | 16,129 | 30,500 | 208,995 | 644,656 | [4] 55,109 |
| 1891–92 | | | 30,000 | | 647,400 | 51,272 |
| 1892–93 | [5] 555,360 | | 30,000 | (5) | 530,015 | 163,595 |
| 1893–94 | | | 30,000 | | 554,092 | 97,264 |
| 1894–95 | | | 31,000 | | 571,384 | 167,193 |
| 1895–96 | | | 32,000 | | 625,715 | 183,409 |
| 1896–97 | | | 32,000 | | 658,539 | 167,514 |
| 1897–98 | | | 32,000 | | 760,804 | 56,438 |
| 1898–99 | | | 32,000 | | 645,877 | 157,123 |
| 1899–1900 | | | 32,000 | | 840,943 | 75,116 |
| 1900–1 | | | 44,500 | | 1,084,331 | 95,952 |
| 1901–2 | | | 44,500 | | 1,119,397 | 84,738 |
| 1902–3 | [6] 904,190 | | 44,500 | | 1,098,113 | 69,773 |
| 1903–4 | [6] 902,510 | | 54,500 | | 1,107,856 | 78,018 |
| 1904–5 | | | 54,500 | | 1,124,782 | 82,175 |
| 1905–6 | | | 54,500 | | 1,228,393 | 58,190 |
| 1906–7 | | | 54,500 | | 1,253,825 | 48,638 |
| 1907–8 | 1,922,334 | | 74,500 | 273,001 | [7] 2,195,335<br>1,652,916 | [7] 172,327<br>50,992 |
| 1908–9 | 2,143,662 | | 79,500 | 287,045 | 2,431,708<br>1,905,993 | 130,933<br>48,405 |
| 1909–10 | 2,417,379 | | 85,700 | 329,095 | 2,746,473<br>2,105,173 | 148,363<br>59,473 |
| 1910–11 | [8] 2,507,669 | 786,062 | 85,500 | 357,585 | 3,719,313<br>2,079,004 | 106,225<br>35,358 |
| 1911–12 | [8] 2,553,364 | 708,185 | 118,500 | 375,192 | 3,547,355<br>2,031,039 | 155,756<br>54,336 |
| 1912–13 | [8] 2,704,565 | 678,196 | 114,500 | 395,674 | 3,888,593<br>2,126,379 | 104,978<br>17,223 |
| 1913–14 | [8] 2,962,168 | 910,683 | 114,500 | 401,607 | [7] 4,274,458<br>2,273,436 | 171,618<br>15,501 |

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[1] Amount apportioned, but not all was used for schools.

[2] Superintendent's figures.

[3] Auditor's figures begin.

[4] Includes local funds, not reported to auditor.

[5] Includes white and black.

[6] Includes supervision; white and black.

[7] Top row gives superintendent's figures and includes local county and city funds, of column 6, table 3; lower row gives auditor's figures, who excludes all funds that do not pass through State treasury.

[8] Presumably includes greater part of sums paid for supervision.

TABLE 5.—*Assessed valuation of property.*

| | | | | | |
|---|---|---|---|---|---|
| 1848 | [1] $191,761,000 | 1881 | $152,920,000 | 1898 | $260,201,000 |
| 1849 | [2] 62,536,000 | 1882 | 151,520,000 | 1899 | 262,144,000 |
| 1850 | [2] 66,381,000 | 1883 | 158,518,000 | 1900 | 270,406,000 |
| 1851 | [2] 66,353,000 | 1884 | 167,124,000 | 1901 | 288,657,000 |
| 1852 | [2] 79,233,000 | 1885 | 172,528,000 | 1902 | 298,440,000 |
| 1853 | [2] 89,289,000 | 1886 | 173,808,000 | 1903 | 311,100,000 |
| 1854 | [2] 92,021,000 | 1887 | 214,925,000 | 1904 | 326,173,000 |
| 1855 | | 1888 | 228,869,000 | 1905 | 347,228,000 |
| 1856 | [2] 110,992,000 | 1889 | 245,917,000 | 1906 | 374,850,000 |
| 1857 | [2] 122,295,000 | 1890 | 258,979,000 | 1907 | 450,288,000 |
| 1858 | [2] 126,949,000 | 1891 | 275,316,000 | 1908 | 467,784,000 |
| 1859–1875 | | 1892 | 260,926,000 | 1909 | 484,350,000 |
| 1876 | 135,535,000 | 1893 | 263,081,000 | 1910 | 508,568,000 |
| 1877 | 130,799,000 | 1894 | 244,586,000 | 1911 | 541,764,000 |
| 1878 | 126,773,000 | 1895 | 242,537.000 | 1912 | 566,807,000 |
| 1879 | 123,757,000 | 1896 | 246,083,000 | 1913 | 580,588,000 |
| 1880 | 139,077,000 | 1897 | 259,427,000 | 1914 | 615,380,000 |

[1] Includes slaves.

[2] Slaves not included.

# ADDENDUM.

After the above story of public school education was put into type the State legislature met in its regular quadrennial session early in January, 1915, and after remaining in session for 20 legislative days adjourned on February 19 to reassemble on July 13, 1915.

The principal educational work accomplished includes an act providing for a literacy commission, and an act authorizing the State board of examiners to grant teacher certificates to graduates of certain institutions of higher learning who have had an amount of professional training approved by said board of examiners, and to those who hold unexpired certificates in other States for a time not to exceed that of the unexpired certificate.

By a two-thirds vote the legislature submitted to the people for popular ratification a proposed amendment to the State constitution, providing that the counties be given power to levy a special tax not exceeding 50 cents on $100 and that the school districts, including incorporated cities or towns, be also given power to levy a special tax of not over 50 cents on $100, provided "that no district tax shall be voted or collected except in such counties as are levying and collecting not less than a 3-mill special county tax." No tax may be levied except by consent of the majority of the voters, who may also fix the rate and the time the tax is to continue.

This tax proposition will be passed on by the electors at the regular election to be held in November, 1916. In a final word of exhortation Supt. Feagin says in his last report:

> The several lines of improvement suggested in this report, including better teachers, longer terms, better attendance, better buildings, better equipment, better organization, better administration, better supervision, all depend upon the willingness and authority of the taxpayers to finance the same. * * * In a word, if Alabama's educational needs were to be resolved into one supreme requirement and that requirement were translated into law, it should be written large: Local taxation, first by counties, and then by districts.

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G. B. Duval, September 20, 1858, to May 5, 1860.

Deals with deaf and dumb institutions, sixteenth sections, moneys, notes, interest, etc.—the details of the system, little on the principles.

Duval, Allen, *and* Taylor, June 1, 1860, to April 29, 1865.

Of considerable value; contains practically all that we have of the war period.

Dr. N. B. Cloud, June 26 to August 14, 1869.

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# THE SCHOOLHOUSE AS THE POLLING PLACE

dward oseph

### By E. J. WARD

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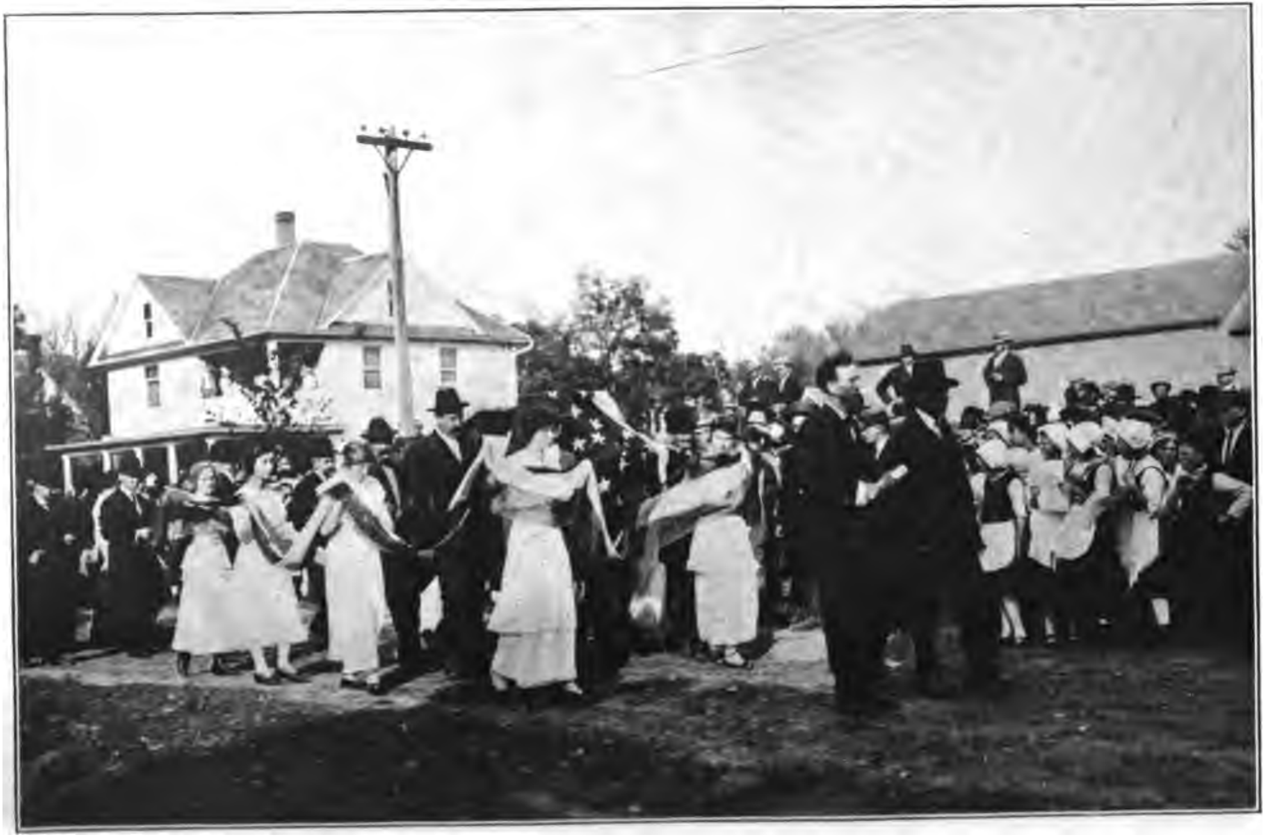

Fig. 1. Ballot box carried in procession from the town hall to the schoolhouse, Sauk City, Wis., Oct. 8, 1914.